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AN ARCHÆOLOGICAL TOUR IN GEDROSIA

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AN ARCHÆOLOGICAL TOUR IN GEDROSIA

BY

SIR AUREL STEIN, K C I E, PH D, D LITT D SC

INTRODUCTORY

THE explorations described in this report formed the continuation and necessary complement of the tour which in the early portion of 1927 had taken me along the North West Frontier from the Kurram river down through Waziristan and the northern districts of Baluchistan In the introductory remarks of the *Memoir* dealing with the results of this tour I have had already occasion to refer to the reasons which had prompted me in 1925 to propose to Sir John Marshall an archæological reconnaissance of the Indo Iranian border lands comprised within the limits of British Baluchistan Foremost among these reasons was the special interest bound to be attracted to this wide and in an antiquarian sense as yet little known region through the important discoveries attending the excavations carried out under Sir John Marshall's direction at the sites of Mohenjo daro and Harappa The area of the prehistoric civilization thus revealed on the lower Indus had extended also into the hill tracts adjoining westwards as was conclusively proved by the abundant finds of interest which had rewarded Mr Hargreaves thorough exploration in 1924 of a burial ground of chalcolithic times at Nal in the territory of the Kalat State

Search of prehistoric remains west of Indus—It had been recognized almost from the first that there were unmistakable links between what is now conveniently designated as the early Indus civilization and the remains brought to light from certain prehistoric sites of Īran and Mesopotamia Apparent similarities noticed between the characters as yet undeciphered on seals from Mohenjo daro and Harappa and those of the earliest Sumerian script would necessarily help to direct attention to the possibility of a line of closer relations having lain through the territories which stretch from the terminal course of the Indus to the head of the Persian Gulf Of these territories the easternmost, extending from the Indus for upwards of 300 miles towards the Persian border, and once forming part of ancient Gedrosia, are now included in the Kalāt State under the control of the Baluchistan administration Hence a

systematic search on this ground for remains of prehistoric settlements continuing the chain westwards distinctly recommended itself as both useful and practicable

Interest of ancient Gedrosia—It was into that far stretched portion of Gedrosia which comprises the territories of Kharan Makran and Jhalawan between the Arabian Sea in the south and the deserts adjoining Afghanistan in the north that I had wished to extend the investigation started at the beginning of 1927 far away in the north near the confines of ancient Gandhara The effective support of Sir John Marshall secured the approval of the Government of India also for this portion of my programme first broached in 1925 together with an adequate grant for its execution

Apart from the special archæological interest already indicated there were considerations of a geographical and historical order which made the opportunity thus generously afforded particularly welcome to me On the one side there appeared good reason to hope that close examination of ancient remains traced in a region now so arid and for the most part truly desertic would help to throw fresh light on the much discussed problem of desiccation with which I had such ample occasion to concern myself in the course of my Central Asian explorations On the other side this ground of ancient Gedrosia however small its importance economically and politically has been ever since the times of the Achæmenidian empire had once been the scene of a notable historical episode Alexander's famous march through its torrid wastes on his return from India Notwithstanding much learned speculation concerning the exact route followed by the great conqueror, some topographical details may continue to baffle the critical student even when examined on the ground But the comparatively ample and trustworthy accounts in our classical sources of the observations made on that hazardous exploit could not fail to be of distinct geographical interest if compared with the present conditions of that region or with those which archæological evidence might reveal as prevailing in far earlier times

Sketch of essential geographical facts—The considerations just referred to together with the important bearing which the physical features in the areas examined must have upon the interpretation of the ancient remains there traced have made it advisable to prefix a brief sketch of essential geographical facts concerning those areas to the record of my antiquarian observations Such a sketch has appeared all the more advisable in view of the scantiness of the information which is to be found in a readily accessible form about that remote and in its present conditions far from attractive region The conclusions to be drawn from a comparison of these condition with what the evidence of the earliest traceable remains indicates may best be comprehensively reviewed in another place

Help of Kalat authorities—Succinct as the data furnished in this preliminary sketch must needs be they will suffice to convey some idea of the great extent of the ground which had to be covered by my explorations and of the difficulties to be faced on account of climatic drawbacks absence of local resources limitations of time and labour etc It would have been quite

impossible to meet these difficulties but for the most willing and effective help of the authorities of the Kalat State which was secured to me from the outset through the arrangements kindly made by Colonel T H KEYES C M G C I E, Political Agent Kalat In preparing the plan of my surveys I derived the utmost advantage from the shrewd advice of this distinguished political officer who through his prolonged association with the State has acquired exceptional knowledge of all its different parts The instructions issued on my behalf by Nawab SIR MIR SHAMS SHAH, K C I E I S O, Wazir i Azam of Kalat assured to me throughout whatever assistance in the matter of guidance, transport and labour could be rendered by the local administration in Makran and Jhalawan In Kharan I enjoyed similar advantages through the help of its chief, Nawab HABIBULLAH KHAN

Great extent of region surveyed—But notwithstanding all this assistance a reconnaissance survey of ancient sites scattered over so vast an area from the drainageless Mashkel basin to the coast of the Arabian Sea and from the Persian border to the southernmost tributaries of the Indus, would have called for several cold weather tours had not the construction during the last few years of tracks practicable for motor transport during the greatest part of the year permitted a saving of time and effort undreamt of before on such trying ground These tracks owe their existence mainly to Colonel Keyes energy They made it possible for me to move rapidly along the great lateral valleys of Makran those of Kej and Rakhshan, to wherever ancient sites could be traced in them Similar facilities for rapid access could thus be gained to the remains of prehistoric settlements in the long stretched valleys which descend through the hills of Jhalawan towards the sea The advantages thus secured were duly set off by the contrast of the long weary marches which had to be done with camels through desert hills or barren plains in order to reach ground of archæological interest away from those main valleys

Character and limits of reconnaissance survey—The circumstances just briefly indicated will explain how it became possible for me by dint of much hard travel to extend my archæological survey over an area which taking the whole of the three territories together measures some 270 miles from north to south and over 300 miles from east to west The fact of this survey having to be accomplished in the course of four and a half months will help to account also for the scope and character of the object aimed at It was my endeavour within the limits imposed by the available measure of time and accessibility to examine all ancient remains I could trace on the surface and to determine their general character and relative epoch Wherever trial excavations seemed advisable for this purpose and local conditions would allow of them they had to be confined to the measure needed for securing data sufficient to settle essential points The complete exploration of remains which at some of the sites traced might well claim months, if not seasons could not come within the purview of my survey In all such cases I must rest content to have indicated to future excavators the places to which their labours may be directed with advantage, and to leave it to them to supplement or modify the conclusions

to which I was led by the observations and the materials obtained in the course of my partial exploration.

Limitations of report.—With regard to the report here presented of the results of my survey I must repeat what I have already stated as to the limitations of my previous report on the explorations in Waziristan and Northern Baluchistan. It has been my endeavour to give a full account of all I was able to observe and note at each surveyed site and by description and illustrations adequately to represent the general character of the archæological materials secured there. But neither the range of my competence nor the time available to me for the preparation of this report will permit of my attempting here a systematic analysis of these abundant materials.

Prehistoric remains lack of chronological control.—They are almost exclusively remains of prehistoric civilization and consequently lack chronological control by datable finds. Well marked variations of style exhibited by the plentiful decorated ceramic wares, mainly painted, clearly betoken different periods of deposit. Indications derived from modifications of design, colour, etc. in these wares as well as protracted observations on the ground as to implements, structural materials, burial customs and the like have led me to form some quasi-empirical conclusions as to the sequence of these periods. But definite stratigraphic evidence as regards all these remains is still scanty. Hence it appears to me that their systematic classification must await on the one hand expert examination of the ceramic materials in respect of their technique and fabric apart from decorative design and on the other close comparison of the same with corresponding relics from other archæological fields.

Comparison of ceramic remains.—My acquaintance with the latter is restricted to the pottery remains recovered by me from wind-eroded sites in the desert delta of Sīstān[1] and from the débris mounds explored by me on the Waziristan border and in Northern Baluchistan during my tour of 1927.[2] In the case of both these areas the painted pottery generally assignable to chalcolithic times shows very close affinity with the ceramic wares from different sites examined in Makran and Jhalawan. But without evidence of stratification it is not possible there definitely to trace successive stages of development. The plentiful and well preserved funerary pottery from Nal which I know for the present only from Mr. Hargreaves' very instructive preliminary report on his excavations of 1924[3] and from the specimens of earlier finds deposited in the Quetta Museum represents, as far as I can judge, a single characteristic type since found by me also at several of the sites to be described below.

I have had so far no opportunity to familiarize myself with the probably abundant materials of painted ceramic ware which the excavations at Mohenjo-daro and Harappa have yielded. But there is good reason to hope that when

[1] See Stein, *Innermost Asia*, pp. 949 ?; Andrews, Neolithic pottery in Sistan, *Burlington Magazine*, December 192…

[2] See Stein, An Archæological Tour in Waziristan and Northern Baluchistan, *Memoirs of the Archæological Survey of India*, No. 37.

[3] See *Annual Report of the Archæological Survey of India*, 1925-26, pp. 64— ?

fully published they will also afford much useful guidance for the close study of the materials brought back from my recent explorations for certain of the terracotta figurines recovered at Mohenjo daro[4] show a very striking resemblance to corresponding relics which my excavations at certain of the Makran and Jhalawan sites have brought to light in remarkable abundance

It is certain that close comparison of the mass of important relics of chalcolithic civilization recovered by the Pumpelly expedition in Transcaspia, by Dr Andersson s explorations in Central and Western China and by excavations at Susa and other Persian and Mesopotamian sites[5] could reveal to experts many interesting points of contact in the materials ceramic and other brought back from both my latest tours But I cannot expect to command leisure and needful facilities for such study before hoped for exploratory labours call me to other fields I feel hence obliged to express the earnest hope that prompt publication of the present report[6] will suffice to attract the attention of competent students in the West to these materials particularly the ceramic ones and that suitable means may be found to render close examination of the originals easier for them eventually through a temporary exhibition of selected specimens at some convenient place in London

CHAPTER I.—A SKETCH OF GEOGRAPHICAL FEATURES

SECTION 1—NOTES ON KHĀRĀN

The portion of the Kalat State over which my tour extended comprises the three territories of Kharan Makran and Jhalawan Though they share many essential characteristics in physical aspects and in climatic economic and ethnic conditions yet well defined geographical features account for their separation in history and tradition The fact that with a total extent of about 62 000 square miles they contain only a population of less than 180 000 souls according to the latest census (1920 21) suffices to indicate their uniform want of natural resources It also helps to explain the very scanty notice they receive in works dealing with India and its borderlands towards Iran and also the obscurity that in Lord CURZON s just words has rarely lifted from these regions '[1]

Sources of geographical information—But a mass of useful and reliable information about those territories collected largely under the orders of that lamented great statesman and scholar is now to be found in the

[4] See ibid, e.g Plates XXX XLIII.

[5] For a convenient synopsis of the publications dealing with painted ceramic remains found at neolithic and chalcolithic sites from China to Western Asia cf Arne Painted Stone Age Pottery from the Province of Honan China in *Palaeontologia Sinica* Series D Vol I fascicle 2 Peking, 1925 Cf also H Schmidt, Prahistorisches aus Ostasien *Zeitschrift f r Ethnologie*, 1924 fasc 5 6

[6] Submitted in August 1928 to the Director General of Archaeology who kindly arranged at his office for the subsequent photographic reproduction of the specimens shown in Plates I XXV

[1] Cf. Curzon *Persia* ii, p 254.

Baluchistan Gazetteer volumes which deal with them[1a] It is to this very valuable publication prepared mainly by Mr R HUGHES BULLER I C S and completed by Major C F MINCHIN D S O I A that reference must be made for any data topographical economic ethnographic or other that may deserve consideration in connexion with the antiquarian results of my journey The remarks offered in this section are intended merely to present the essential geographical features of those territories in a bird s eye view as it were and in the barest outlines I may conveniently refer in a note below to those cartographical publications of the Survey of India which will be of use in following the general observations here offered and the topographical details connected with my explorations[2]

Barrenness of Kharan—The territory of Kharan with which we may begin our survey is almost entirely confined to the great drainageless basin which extends from the eastern limits of the Persian provinces of Sistan and Sarhad to the north western hill ranges of Jhalawan In the north the rugged range of Raskoh separates it from the equally arid tracts of Chagai To the south the Siahan range forms the boundary towards Makran By far the greatest portion of the country is an utterly barren waste the central area being filled by a great desert of moving sands The few rivers which descend into the basin from the enclosing ranges do not carry water for more than a part of the year and only in the case of heavy floods do they reach their terminal depressions or Hamuns Owing to the great aridity of the climate cultivation is entirely dependent on what irrigation is obtainable from the floods brought down by the rivers and hill torrents This supply even in good seasons is too scanty to permit of more than an insignificant portion of the land (estimated at about 2 5 per cent of the total area) to be made productive[3] Most even of the agricultural population depend for their maintenance also on pastoral occupations and in consequence are semi nomadic while the rest live mainly by their flocks and the breeding and hire of camels

Scantiness of population—Such conditions sufficiently explain why with a total area of some 14 200 square miles Kharan can maintain a population

[1a] See Baluchistan District Gazetteer Series Vol VII Makran Text and Appendices by R Hughes Buller I C S Bombay 1906 Vol VII A Kharan Text and Appendices by Major C F Minchin D S O I A Bombay 1907 Vol VI B Jhalawan Bombay 1907

Very useful supplements to these volumes are furnished in the report of Sir Denys Bray on the Baluchistan Census of 1911 and in the Baluchistan District Gazetteer Series B volume S a es Village Statistics by R B D wan [illegible]

[2] [illegible]

Sh et [illegible]

recom [illegible] and Adjacent Countries Series sho v Kharan Makran and Jhalawan together with portions of Persian Makran Afghanistan Baluchistan and the Indus valley on the scale of 1 1 000 000

For details of the ground along the routes followed on my tour the Degree Sheets Nos 31G J K M N O 4R K I 3 A B C F F C I on the scale of 1 253 440 (1 inch to 4 miles) published for official use only may be consulted The sheets for the most part reproduce the first proper survey made of these portions of Baluchistan in the nineties of the last century It is satisfactory to know that a fresh survey is contemplated It is especially desirable also with regard to the correct record of local names and areas of cultivation

[3] Cf Kharan Gazetteer pp 91 sq

of only about two souls per square mile [4] and why emigration largely temporary to the Helmand valley and Sind is prevalent The precarious nature of cultivation accounts also for the almost entire absence of permanent villages in Kharan the only one of any size being Kharan kalat the seat of its chief Were it not for the plentiful produce of the date trees which provide the staple crop in certain localities of the south west and permit of export in exchange for grain the population of Kharan would be still more limited That it was in former times considerably larger has been rightly inferred from the great number of massive stone dams known as Gabarbands and supporting what were once terraced fields they are to be found in now utterly desolate valleys of the hill tracts adjoining the great basin [5] I shall have occasion fully to discuss this evidence when describing the corresponding remains examined in Jhalawan where they are equally frequent [6]

Character of population—The open configuration of the Kharan basin at its north western extremity offers easier access from Sistan than from any other adjacent territory This adequately explains why the very scanty indications concerning the early and mediæval history of Kharan point to some closer connexion with that important and once rich province of Iran the ancient Drangiana It also accounts for the comparatively homogenous character of its population With the exception of the mostly nomadic Brahui tribes in the hills adjacent to Jhalawan it speaks western Baluchi and is manifestly of Iranian stock Owing to the nature of the country mostly desert and lacking even a single oasis of any importance Kharan could never have served as a passage land for trade migrations or important military operations But on the other hand this isolation and the hard conditions of life appear to have preserved more vigour and enterprise in the race than is to be found among the Baluch of Makran This together with the inhospitable character of their own country probably helps to account for the far reaching activities as raiders and fighters which their chiefs of the Nausherwani clan were able to carry on right down to the third quarter of the last century at the expense of their neighbours to the north east and south [7]

SECTION ii —NOTES ON MAKRĀN

Configuration of Makran territory coastal belt—Makran to which we may now turn in the south is a much larger and diversified territory The fact that its area estimated at about 26 600 square miles maintains a

[4] The Census of 1920 2 showed a population of 97 38 cf Baluch District Gazetteer Series B vol *States* p 2

[5] See *Kharan Gazetteer* p 58 and pp 50 sqq where very instructive observations of Mr Vredenburg are quoted from his Sketch of the Baluchistan Desert *Memoirs of the Geological Survey of India* xxxi pp 213 sq

[6] See below pp 145 sqq 168 sqq 181 sqq

[7] Cf *Makran Gazetteer* pp 31 sqq for an interesting account of the war[illegible] in which the Kharan chiefs were able to maintain quasi independence for nearly two centuries until 1884 when Azad Khan justly de[illegible]bed the last and greatest of Baluchistan s freebooters reluctantly acquiesced in British suzerainty

population of only about 2 7 souls per square mile[1] sufficiently indicates that here too most of the ground is desert But the configuration of the country greatly differs The greatest part of the area is occupied by barren mountain ranges stretching from the north east to the west in parallel arcs and gradually decreasing in height The southernmost of them conveniently designated as the Makran Coast Range overlooks the desolate shores of the Arabian Sea There scattered small settlements of fishing folk supported here and there by little patches of precarious cultivation make their living in ways not essentially very different from those of the primitive Ichthyophagoi whom Alexander s troops met on their passage through these arid wastes The valleys formed by the numerous torrent beds which break up this range afford nowhere a chance for even semi permanent occupation except that in Kulanch to the north of the roadstead of Pasni where small villages carry on agriculture wholly dependent on the capricious rainfall of the coast As the formation of the range consists mainly of more or less soft clays, intersected by harder calcareous layers excessive erosion has produced here many fantastic hill forms or else an interminable succession of low serrated ridges sticking out from equally bare detritus

Kej river valley —To the north this coastal range is flanked by the long stretched valley of the Kej River Continued westwards by that of the tributary Nihing River and to the north east by the open drainageless basins of Kolwa it forms the economic backbone as it were of Makran This is sufficiently illustrated by the fact that this valley tract extends for upwards of 200 miles and contains close on one third of the whole population of the country It also accounts for the current application of the name Kej Makran to the whole territory as attested since mediæval times by Marco Polo and others[2] Significantly enough more than one half of the people in the tract are to be found in the Niabat of Turbat[3] There in an almost continuous string of oases lining the banks of the Kej River with their fields and date groves irrigation is made possible both by Karezes or subterraneous canals and by cuts (*kaur jo*) taking off from large pools in the river bed These retain water even after the rain floods from the mountains always heavy but very uncertain have passed by and left the greatest portion of the river's

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[1] The Census of 1930 31 showed a population of 1 360 the figure having remained practically stationary since the first census in 1910 11

[2] Cf Yule Marco Polo ii pp 410 sq The kingdom ... fu ego fully ... a peculiar ka ... and industry ... food is rice a ... There is no more to be said about them

And you must know that this kingdom of Kesmacoran is the last in India as you go towards the west and the north west.

The ... donkeys ... o cas on t

[3] The ... Mand ... r Turnp and

course dry Somewhat similar conditions prevail also in Tump and Mand near the Nihing River

The Kolwa tract —The open and for the most part drainageless tract of Kolwa forms for some 80 miles a natural continuation of the Kej valley proper from which it is separated by an almost imperceptible watershed It contains by far the greatest dry crop area of Makran and its export of barley to other parts in years of good rainfall is considerable Yet how rare such rainfall is and how precarious this cultivation in Kolwa is shown by the very scanty population of the tract being practically all nomadic All the more interesting is the evidence which the explorations to be described below have revealed as to Kolwa having in pre historic times been the seat of a large and thoroughly settled population The contrast between the massively built stone structures traceable at more than one ancient site of Kolwa and the wretched huts of palm matting which house practically the whole of even the settled population in the Kej valley as elsewhere in Makran is striking and illustrates the great change which has come over this whole region

The Dasht valley —The tract known as Dasht through which the united waters of the Kej and Nihing Rivers find their way to the sea at the bay of Gwatar forms an important south western adjunct of Kej Wide alluvial stretches of fertile soil are to be found on both sides of the river below the defile where it breaks through the Gokprosh hill chain and here cultivation necessarily precarious is carried on with the help of the rainfall caught by embankments But in addition crops are raised on lands adjoining the river bed in years when heavy floods cause them to be inundated A good deal of trade, largely due to the fishing industry of the coast finds its way down the Dasht to the small ports of Jiwani and Gwadar The latter together with a surrounding coastal area of some 300 square miles politically forms part of the State of Muskat It is a characteristic sign of the close intercourse which probably since early times has linked Makran with easternmost Arabia and has left its mark also on its population

The Central Makran range —To the north of the Kej valley and its continuations there extends the Central Makran Range starting from the south eastern extremity of Makran and stretching with its several branches in an arc from north east to west Though the belt covered by the range attains westwards a width of over 40 miles and supplies almost all the drainage gathered by the Kej River and its tributaries yet the only area capable of more or less permanent occupation is confined to the small valley of Buleda north of Turbat and to spring irrigated patches in the Zamran hills above the Nihing River Of the two drainageless depressions of Parom and Balgattar containing salt marshes usually quite dry in their centre only the former has a small fringe of cultivable ground Elsewhere the scanty pasturage to be found after rainfall along the torrent beds is the only resource attracting nomadic visits

The Rakhshan valley —The northernmost division of Makran is formed by the large Rakhshan valley It is enclosed on the south by a long stretched

branch of the Central Makran Range and on the north by the Siahan Range which divides it from the *basin of Kharan*. The Rakhshan River from the head of its drainage on ground included in the Kharan chiefship down to its junction with the Mashkel River at Gwargi has a course of over 150 miles. Yet it is only in the short stretch of oases found along its middle course and collectively known as Panjgur that irrigation is available from Karezes and pools in the river bed filled by floodwater and springs. The permanent villages of Panjgur account for over 84 per cent. of the whole population of the valley. This, including the people of its north-eastern extremity administered by Kharan and small semi-nomadic settlements, is reckoned at about 15,800 souls. Such cultivation as can be practised elsewhere is dependent on the capricious rainfall and restricted by the stony nature of most of the ground in the valley. The greater elevation, some 3,000 feet above sea level at Panjgur, makes the summer heat less trying in Rakhshan than it is in low-lying Kej and the coastal tract.

Makran as a land of passage.—This rapid sketch of the physical features of Makran and its present economic conditions makes it clear that it could never during historical times have been a politically important portion of the Indo-Iranian borderlands. Yet a look at the map shows that in spite of its lack of natural resources Makran is likely to have favoured ethnic relations between southern Persia on the one side and the lower Indus region on the other. This can be safely concluded from the facilities which the direction and open character of the two main valleys of Kej and Rakhshan afford for traffic and gradual migratory movements from either region. Both of them give access by easy routes up the *Mashkel* and *Sarbaz* rivers respectively to Bampur and other well-cultivated tracts in the Kirman Province of Persia. They themselves can be gained from the side of India by several routes through the Jhalawan hills and the littoral territory of Las Bela.

History of Makran.—It cannot come within the scope of these notes to review the varying fortunes which Makran's history underwent during successive periods. But a reference to the pages of the *Makran Gazetteer* in which Mr. Hughes-Buller has collected such historical and traditional data as were conveniently accessible at the time[4] will show that the history of Makran as known to us from the scanty sources available duly reflects the effect of the geographical factor just indicated. Dependence either on the power holding the neighbouring Persian provinces of Kirman and Sistan or else on the rulers of Sind and the hills immediately adjoining the Indus valley westwards has always characterized the political status of Makran from the earliest times to which reliable data allow us to go back right down to the present.

[4] See *Makran Gazetteer* [illegible]
rulers ir [illegible]
Khans [illegible]
exam n [illegible]
Makran [illegible]

Difficulties of troop movements.—It is of special interest to note how strongly the desert character of most of Makran is brought out by successive historical records. In Arrian's detailed account of the sufferings which attended Alexander's march through Gedrosia and of the heavy losses his army there suffered we have an impressive picture of the forbidding nature of the ground to be met over great portions of the country.[5] The statement quoted by Arrian from Nearchos about the very severe losses which according to local tradition had attended the attempts of Semiramis and Cyrus to cross Gedrosia with an army[6] clearly proves, whatever the facts underlying the popular tradition may have been, that the country was considered then already, just as it is now, utterly unsuited for the movement of large bodies of troops.

Alexander's passage.—The utter inadequacy of local supplies, the want of sufficient grazing and in many places even of water must all through historical times have rendered the passage of Makran by a considerable force a very hazardous undertaking. Alexander's success in overcoming such formidable obstacles, even though at the cost of heavy sacrifices, was in truth but the exception that proves the rule, while at the same time a proof of his incomparable genius as a leader. Hence it is easy to understand the dread of barren Makran expressed in the reports of those Arab commanders who under the early Caliphs' orders endeavoured to use Makran as a base for the invasion of India.[7]

Mixture of ethnic elements.—The combined result of geographical and historical factors is easily recognized in the strange mixture of ethnical elements which form the present population of Makran. Reference to the Gazetteer will show the many tribal divisions represented in a total population comparatively so small.[8] Here it will suffice to point out that though the great bulk of the Makranis call themselves Baluch and speak the Iranian language called Western Baluchi, yet the race to which that ethnic name properly applies appears to have reached Makran on its eastward move from Persia only in mediæval times. It is certain that it largely intermingled then and since both with the earlier stock of the country and with later immigrants. Among them can be distinguished Brahuis of Dravidian speech from the Kalat side, Jadgals from Sind and Las Bela, Persians from the Helmand valley, Arabs from the Persian Gulf and even a not inconsiderable African element introduced in the shape of slaves. The influence which Indian civilization, whether of Aryan or pre-Aryan type, is likely to have asserted in Makran from a very early period, is symbolized as it were by the fact that the Gichki families who dominated Makran in the troublous times before and during Kalat rule and still retain a privileged position, are avowedly of Indian Rajput descent.

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[5] Cf. Arrian, *Anabasis*, VI, xxii–xxvi.

[6] See *ibid.*, VI, xxiv, 2, 3.

[7] Cf. *Makran Gazetteer*, pp. 13 sq., and the passage quoted by Mr. Hughes-Buller on its title-page from 'The lament of Sinan ibn Salama' as reproduced in Sir Percy Sykes, *Ten Thousand Miles in Persia*.

[8] Cf. *Makran Gazetteer*, pp. 82-112.

None of the racial elements which successively invaded Makrān and were content to remain there could preserve for long such virile qualities as had helped them to their conquest. In this we may well recognize the effect which the trying climatic conditions of Makrān combined with other physical drawbacks are bound to have had at all times upon its settled inhabitants

SECTION III.—NOTES ON JHALAWAN AND THE BRĀHŪIS

Physical features of Jhalawān.—The territory known as Jhalawān, in accordance with a comparatively modern political division of the Kalat State may roughly be described as comprising the mountainous region stretching from north to south which divides the lower Indus valley from Khārān and Makrān [1] In the north it is bordered by the hill tracts of Sarawān extending from Kalāt, the capital of the State, towards Nushki, Pishin and Quetta In the south there adjoins the State of Las Bēla confined mainly to the flat stretch of country between the extreme offshoots of the Jhalawān ranges and the Arabian Sea The whole of Jhalawān territory comprising an area of some 21,100 square miles is occupied, as the map shows, by a succession of mountain ranges striking approximately from north to south These attain their greatest heights, up to 9,830 feet, in the north near Kalāt and gradually grow lower towards the south. With the exception of the highest portions which in favourable seasons retain snow for brief periods, or of seasons with unusually good rainfall the slopes of the mountains are barren throughout In the valleys dividing these ranges there gather rivers which all carry their drainage either into the sea, like the Hingol, Porāli and Hab, or else to the Indus But it is only at the time of rain floods that these rivers contain water along their whole course and then, too, only for very brief periods

Aridity of climate.—As a result of the aridity which characterizes the climatic conditions of Jhalawān, though perhaps not quite in so marked a degree as those of Khārān and Makrān,[2] by far the greatest portion of the population reckoned at the Census of 1920 21 at 79,700 souls, depends in the main on pastoral resources and hence leads a nomadic life Though springs and Kārēzes, owing perhaps to the greater height of the ranges and a

[1] The name *Jhalawan* is explained as derived from the Baluchi word *Jahl*, meaning below or to the south the corresponding designation of *Sarawan* from Balūchi *sar* (head the above) *being applied* to the portion of the Kalat State which adjoins to the north [illegible]
divis ons of tl [illegible]
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vation on unirrigated land [illegible] to illustrate the very precarious nature of culti-

slightly less scanty rainfall are more widely distributed than in Makran yet only less than one fourth of the total cultivated area receives irrigation[3] The rest is entirely dependent on the chance of adequate water being secured from the rare floods which in favourable years descend in the torrents and river beds or being caught by poorly constructed earth embankments from the slopes above the fields

Scantiness of cultivation—In consequence of the uncertainties besetting agriculture on all unirrigated land a very considerable portion of the land owning or tenant population is accustomed to move annually for the winter months to the plains of Sind or the Kachchi tract below Sarawan in search of employment They thus avoid also the cutting cold of the winds which sweep down from the higher valleys at that season But in the spring when the great heat of the Indus valley begins to make itself felt they all return with their families and with such savings as there are invested in foodstuffs But for this seasonal migration a succession of unfavourable years such as is fairly frequent would be marked by famine conditions besides causing whole areas of cultivation to relapse into the appearance of a bare clay desert[4] The precarious character of agriculture in most parts of Jhalawan deserves to be specially noted in view of the evidence which the sites described below have furnished as to the existence there of a considerable settled population in pre historic times

Historical references to Khozdar—The geographical features of Jhalawan and the limitation of its economic resources account for the scantiness of historical data concerning the territory The earliest notices to be definitely located there relate to Khozdar which is repeatedly mentioned in connexion with Arab enterprises in the seventh century against Sind[5] That small tract enjoys the advantage of adequate irrigation from its river and of being situated at a point where main routes coming from Makran and Sind from Kandahar and the sea coast meet Hence it was likely to attract attention as a convenient base for operations against the lower Indus whether started from the west or from the north west the latter on the whole the more likely direction Later too in mediaeval times Khozdar is named among the territories affected by the conquests of successive rulers who extended their power into India from the north west

Brahui population—It is a matter for regret though scarcely for surprise that none of these scanty historical records contain any indication as to the ethnic character of the people encountered For very considerable interest attaches to the fact that a vast majority of the present population in Jhalawan is composed of Brahuis who speak a Dravidian language and thus are wholly

[3] Cf. *Jhalawan Gazetteer* p 145

[4] See below pp 105 sqq for observations bearing on such conditions about Greshak Nal and Wadh

[5] Cf *Jhalawan Gazetteer* pp 34 sq for notices of Khozdar in early Muhammadan records

distinct linguistically from all the surrounding populations speaking either Indian or Iranian tongues[6] The same is the case, though not quite to that extent, in the hill tracts of Sarawān immediately adjoining to the north and in geographical respect closely resembling, while Khārān, too, contains a considerable Brāhui speaking element[7] This presence of a Dravidian language in territories to the west of the Indus separated by a vast distance from the areas of Southern India where Dravidian tongues are spoken, seemed until quite recent years a very puzzling phenomenon Only conjecturally could the view be advanced that the Brāhui language was a survival or 'relict' from that early period which preceded the conquest of a non Aryan, presumably Dravidian-speaking, population in Northern India by the Indo Aryan tribes of Vedic times

Significance of Dravidian speech—The discoveries made at Mohenjo-daro and Harappa have now proved the existence in the Indus Valley of a civilization which certainly is far older than that invasion and which flourished among a race distinct from the Indo-Aryan stock Not until the script on the seals brought to light by those discoveries can be read will it be possible to arrive at a definite conclusion as to the affinity of the language it records But in view of the evidence already secured the fact that a Brāhui-speaking population is to be found in the Jhalawān and Sarāwan hills immediately above the plains about Mohenjo daro assumes a fresh significance That barren region affording neither attraction nor room for settlement to any invader is just the ground where the nomadic fringe, poor semi barbarous relatives as it were, of that ancient settled race, would be likely to be left undisturbed It thus could escape the fate of "Aryanization" which their congeners in more favoured lands have undergone

Later waves of ethnic migration—Quasi negative support for the process here assumed may be derived from the way in which two waves of ethnic migration rolling by as it were in historical daylight, have left the Brahuis undisturbed in their arid mountains The Balūch after passing through them from the side of Eastern Persia and Makran cut their way to more attractive ground on both sides of the Indus, far more Balūch being found now in Sind and the Punjab than in the province to which they have given their name[8] In the same way those Pathan tribes whom their virile qualities and love of expansion have brought from their old seats in the highlands east of Kabul, Ghazni and Kandahār right down to the Indus, have never shown any tendency to oust the Brahuis, easy as they would found such encroachment

[6] *The Baluchistan Census Report* 1921 by Major T C. Fowle and R B Di[illegible]an Jamiat Rai Calcutta 1923, shows in Table X 64 218 speakers of Brahui for Jhalawan against 14 850 speaking Baluch [illegible] own by the fact that the [illegible] Dehwari (a local dialect [illegible]

[7] [illegible] very interesting remarks on the disintegration proceeding among the Brahui race quoted from Sir Denys Bray s very instructive Census Report of 1911 see loc cit. p. 97

[8] Cf *Baluchistan Census Report* p 96

Rise of Brahui confederacy—Among people so backward in all ways and so absorbed in the struggle with an unkind nature no traditional record of historical value can be expected The earliest fact remembered by the Brahuis and commemorated in a popular ballad is their securing freedom from Jat or Jadgal domination [9] This points to former temporary dependence on rulers from Sind where the Jadgal tribe is still widely spread and once played a prominent part But neither migration nor conquest on the part of the Brahuis is implied That their tribal organization is not based on agnatic kinship as among Pathans and Baluch is an important racial distinction It appears to have gradually consolidated when the Moghul sovereignty weakened Finally in the second half of the 17th century it gave rise to a military confederacy of the Brahui tribes more or less on feudal lines which found formal expression in the loosely knit Kalat State under the Ahmadzai family

The territory of Sarawan shares the character of Jhalawan very closely in all essential points both as regards physical features and the constitution and ways of its present population In view of this and the fact that my work within Sarawan was confined to a rapid survey of mounds in a small number of localities no separate sketch of the territory need be attempted in this place

CHAPTER II REMAINS IN KHĀRĀN

SECTION 1—FROM QUETTA TO NAURŌZ KALAT

Preparations at Quetta—On November 28th 1927 I started for my tour from Quetta There during a week s busy stay much kind help on the part of Colonel E H S James C I E C B E Revenue and Judicial Commissioner Baluchistan and of Colonel T H Keyes C M G C I E Political Agent Kalat had done everything possible to facilitate my practical preparations These included the provision on hire of two Dodge motor lorries specially suited for use on the rough tracks in Makran and Jhalawan and the supply of aluminium tanks and canvas Chaguls for the transport of water The latter equipment was obtained on loan from the Quetta Arsenal through the kind offices of Colonel H Mccredy R A Chief Ordnance Officer and proved most useful at the numerous sites where water could be obtained only from some distance or was too brackish for use

Assistants for tour—Quetta was in other ways also a very convenient place for mobilization There my small party was joined by Naik Abdul Ghafur surveyor and draftsman whose services had been kindly lent to me from his distinguished Corps K G O First (Bengal) Sappers and Miners His intelligent zeal and very efficient work was to prove once again as on my previous exploratory tours of 1926 and 1927 of very great help to me in respect

[9] See *Jhalawan Gazetteer* pp 3 46 sqq

of both survey and excavation at ancient sites As the services of Mr A T Brendish could not be spared again by the Survey of India Department assistance for the developing of the photographs taken by me was provided at very short notice by the authorities of the K G O First Sappers and Miners They very kindly arranged to depute with me Akhtar Munir a young sapper of the Corps after assuring his preliminary training On my tour I also had the benefit of the practical help of Pandit Ram Chand Bali of Srinagar Kashmir my temporary Clerk for the last ten years As before on my tour in Northern Baluchistan he did his best to make himself useful by helping to supervise excavation work and to pack antiquities

Halt at Mastung —A variety of considerations induced me to start my archaeological surveys from Kharan and the most expedient line of approach to that territory as yet somewhat difficult of access lay by the metalled road to Kalat and thence as far as Surab by the motor track leading to Panjgur in Makran Leaving Quetta on November 28th I reached the oasis of Mastung the best cultivated portion of Sarawan and the headquarters of the Kalat Political Agency There I should have been obliged in any case to make a short halt in order to dispose of the very last tasks connected with the printing of *Innermost Asia* before leaving regular postal communications behind While thus busily engaged in exacting desk labours such as revising in proof the voluminous Index prepared by another hand for that work I greeted almost with relief the information communicated from Kharan to the Assistant Political Agent that the camel transport thence dispatched for my use could not be expected to meet me at Surab before December 6th at the earliest I was thus enabled to remain at Mastung until December 5th and to use the peaceful isolation there afforded for clearing my hands by almost incessant work of obligations to which it would have been impossible to attend later without hampering my movements and labours in the field During my stay at Mastung I snatched time also for a rapid inspection of several ancient mounds situated towards the north-western extremity of the ground reached by the Karez irrigation of the oasis My observations on these mounds will more conveniently be recorded below together with those I was able to make there and elsewhere within Sarawan on my return journey[1]

Passage through Kalat —On December 6th I drove to Kalat a distance of 56 miles mostly across wide stony valleys which under a grey wintry sky looked doubly dreary and barren A brief halt on the way at the levy post of Mungachar allowed me to collect information about certain ancient mounds which I was subsequently able to examine in that area of cultivation on my return journey in April At Kalat I was able to gather some indications as to mounds supposed to mark the position of settlements older than the present hamlets These curiously recalling Eastern Persia are scattered over the head of the valley and together with the half deserted Bazar and the Khan of Kalat's castle above it constitute the capital of State

[1] See below pp 157 sqq

From Kalat to Rodinji.—Leaving the examination of these mounds until my return I started on the following day for Surab by the motor track which bifurcates there and gives access south-eastwards to Khozdar and Karachi and south-westwards to the Rakhshan valley and Panjgur. It first leads past the western face of the low rocky ridge which at its extremity bears the high clay and rubble built ramparts crowned by the Khan's gloomy looking stronghold (Fig. 1). Then a few miles beyond it crosses narrow winding gorges towards the open plateau known as Dasht-i-Goran. The watershed passed here at an elevation of about 7,000 feet is supposed to make the boundary towards Jhalawan. On the eastern side of the plateau the road passes the small village of Rodinji with fields partly irrigated from two small Karezes and partly dependent on rainfall.

Mound at mouth of Thok valley.—Two mounds designated as throughout the Kalat State by the term of *damb* were reported here. They could not be surveyed by me until my return on April 10th, but may conveniently be mentioned here. One of them rises on gently sloping ground about 1½ miles ESE. of the village and to the north of the mouth of the Thok valley. From this the only Karez still actually available for irrigation receives its scanty supply of water. The mound, which probably has been built up by debris deposits over an outcrop of rock, measures at its base about 220 yards from north to south and 140 yards across. Its height is about 28 feet above the natural slope to the east. Its surface is covered with small stones and plentiful potsherds, mostly plain but greatly varying in fabric and colouring. Only few fragments could be found showing any patterns and these too only of the simplest designs. Their body like that of the plain ware is of red, grey, dark buff or greenish colour. As neither glazed nor any relief decorated pieces could be found, I feel inclined to assign occupation of the site to a period which followed the pre-historic use of painted pottery but preceded historical times. Streaks varying in intensity of tint are frequently to be observed on the surface of the plain pieces and are likely to be intentional.

Kuki damb.—About three quarters of a mile to the north rises the hillock known as *Kuki damb* near the mouth of another and smaller valley. It forms the last detached offshoot of a low but precipitous hill spur trending from the east and, as the outcrop of chalky rock on the slopes shows, is of natural origin. Its flat top, measuring about 70 yards from north to south and some 18 yards across, must, as confused heaps of rough stones show, have once been occupied by rough dwellings. From there the plentiful pottery debris has been washed down which covers the slopes of the hillock and the ground close to its foot. These potsherds are of just the same type as those found at the previously described mound and thus indicate approximately contemporary occupation. At both sites small fragments of chert and similar hard stone could be picked up in plenty, but none were clearly recognizable as artifacts.

Failure of water from Karezes.—No water is now to be found in the vicinity of either site. But at the western foot of the Kuki damb and some

120 feet below its top there had been sunk about eight years before my visit and at great expense wells for a Karez It yielded water for four years allowing a large orchard to be planted north of Rodinji village but has since completely dried up The same fate has recently overtaken a small Karez of old date which used to carry water to the groves of Aliabad a little hamlet at the mouth of the Thok valley and about a mile and a half south of Kuki damb Complaints about the subterraneous water supply having failed in the same way during recent times were to be heard also elsewhere in this tract

Mound at Benn chah—About seven and a half miles to the south west of Rodinji the road passes the lonely halfway halting place between Kalat and Surab called Benn chah About a furlong to the south of it there rises a mound measuring about 200 by 150 yards at its foot to a maximum height of about 30 feet above the stony scrub covered plain of the valley Plentiful potsherds of plain ware varying in colour from pink to buff grey and light greenish tints are found on the slopes and less frequently also fragments of similar fabric decorated with coarsely executed narrow bands or other simple patterns mostly in dark brown Fragments of iron ore were picked up at the foot of the mound and on its slopes also small pieces of flint or chert apparently unworked Comparison of the pieces bearing painted decoration with the decorated ware from chalcolithic sites clearly indicates later occupation of the site probably contemporary with that of the mounds near Rodinji Precarious cultivation wholly dependent on rainfall is carried on in favourable years by half a dozen households in the neighbouring area known as Mall A Karez passing the roadside shelter was declared to have been dry for a long time

Arrival at Surab—A drive of some 23 miles along the bare plain of the valley brought us by nightfall to the post of Surab in the centre of the cluster of small villages collectively known by that name There I found the camels just arrived from Kharan and was thus able to arrange without delay for our onward move next morning My wish to visit at least a portion of this territory in the north east was prompted specially by the remembrance of certain old remains which had been noted there by Lieutenant (later Sir Henry) Pottinger in 1809 on his passage towards Sistan On a rapid tour made from Nushki to Kalat in 1904 I had failed to locate them Regard for the distances to be covered through the mountains where no motor tracks are available necessitated the earliest possible start So my camp was sent ahead on the morning of December 8th while I inspected the two old mounds of the existence of which in the Surab area information had reached me

Mound near Neghar—The half dozen of small villages which cluster around the fortified post of Surab in the valley of the main feeder of the Gidar Dhor river owe their comparatively prosperous look to the presence of several springs and Karezes These derive their supply of water from the rugged range which stretches along the eastern side of the valley and at some points rises to heights of over 9 000 feet Owing to the bitter cold of the winds Surab is dreaded in the winter Hence almost all the people of the tract had already started on

their hibernal migration down to Sind Thus we found the village of Neghar about three miles to the south east of the post quite deserted Close behind it at the foot of a steep rocky outlier of the range there extends a low mound of artificial origin rising about 20 feet above the level of the immediately adjoining fields Its slopes are thickly covered with rubble from roughly built decayed dwellings Remains of their walls could be traced on the flat top of the mound measuring about 70 by 60 yards That the site was occupied, at least periodically, down to historical times can be safely concluded from small pieces of glazed ware decorated with designs in various colours and manifestly mediaeval The other ornamented potsherds picked up comprise fragments of superior red ware bearing on the inside or outside well-executed patterns in black (N D 1, Pl I) These on the analogy of similar pottery from other Baluchistan sites may I believe be attributed to late pre historic times The same applies also to a few fragments of similar ware showing simple incised or relief decoration (N D 2, Pl I)

Mound of Surkh-damb—Riding from here across ground partially cultivated I next visited the much larger mound known as *Surkh damb* situated close to the village of Surkh and about half a mile to the south west of the Surab post It extends for about 250 yards from north east to south west with a maximum width of about 140 yards It rises up to 15 feet above the level of the irrigated fields close by Among the abundant plain pottery of good reddish ware there were picked up here also pieces ornamented with simple black bands or else with narrow ridged ribbing a method of decoration of which examples can be found also among the ceramic remains of sites of the N W Frontier dating from Buddhist times No glazed pieces could be found here Here I may conveniently note that as far as my enquiries extended no pottery of any sort is now locally produced in Jhalawan or Kharan Imports from Sind are also rare and confined to households of some standing The vast majority of the population is accustomed to use only skins or wooden vessels of the coarsest description

Journey to Nauroz kalāt—The four fairly long marches which carried us across the mountains to Nauroz kalat offered no opportunities for antiquarian observations But they allowed me to gain some acquaintance with the physical conditions prevailing in the Garr range which divides Kharan from Jhalawan These conditions must at all times have affected the life of such scanty nomadic population as this region could ever support They may be considered more or less typical of the higher of the ranges which occupy the greatest portion of Jhalawan For this reason and also because the major portion of the journey lay along a line not described in the official handbook dealing with Routes in Southern Baluchistan a succinct account of these marches may find a record here

March to N W of Surāb—Our march from Surab on December 9th lay all the way to the north west and led first across an extensive stretch of *khushk āba* cultivation, wholly dependent on rainfall On ascending the stony glacis towards the broken hills which divide the Surab valley from that marked on

the map as Chilbaghü I noticed much decayed remains of two or three dams which looked as if meant to direct flood water from the slopes towards that cultivated ground In the wide valley trough crossed further on vegetation was to be found only near a succession of stony torrent beds holding water in a few pools Half a dozen deserted mud and stone hovels scattered over the plain indicated occasional cultivation of small patches by wandering flock owners in favourable years Beyond this valley there stretches a chain of much eroded rocky ridges rising to over 7,000 feet In a narrow ravine known to our Kharan guides as *Zarago* drinkable water was found by digging in a shallow dry channel and there we halted for the night

Across the Siah kumb valley—The next day's march took us first for a couple of miles across the easy watershed of this hill chain, called Koh i Fudak where wild pistachio trees grow in plenty It forms a divide of some importance On descending we first passed a spring in a ravine that feeds the Chutok river a main tributary of the Korakan and then less than a mile farther we reached the southern extremity of the open Siah kumb valley the drainage of which descends into the Bado river Both Korakan and Bado flow into the Kharan basin But their flood waters do not meet until close to the ground where they lose themselves in the desert sands Moving to the north west for about four miles we crossed the head of the Siah kumb valley which affords fair grazing for camels and flocks and is hence regularly visited by nomadic Brahui encampments Here I first noticed in places those curious small enclosures roughly marked with rows of stones which are laid out by Brahui nomads in commemoration of their dead and are known as *chēdal* They are supposed to symbolize dwelling places for the dead and are used for funeral gatherings As they are always to be found away from the actual places of burial they may well indicate a survival from pre-Muhammadan rites

Descent into Jal valley—On leaving the Siah kumb valley the track led through a maze of bare blackish hillocks and narrow ravines most of these draining towards the Chutok The valley in which the latter has cut its way through the mountains would afford the most direct route to Kharan But it was declared to be so narrow as to be wholly impassable for camels Then the track emerged in a smaller valley stretching like that of Siah kumb from south to north and known as Burbur Here too scrub and hardy grasses offer good camel grazing and small pools of water remained in a shallow bed draining into Siah kumb and the Bado We had followed the Burbur valley for about three miles when the usual caravan track from Kalat to Kharan was struck It led first north westwards into narrow rock lined ravines where once more the Chutok drainage was struck and then up to the Jal Pass some 6,500 feet above sea level From there it descended into the narrow gorge of the Jal river winding between rock walls so high and so steep as to make a passage quite impossible in the event of rain A small sandy terrace with some trees afforded a safe camping place at a point known as Kundi

March in Jal gorge—A little distance below this the river gorge turns into an extremely narrow tortuous rift Masses of fallen rock were said to render this impassable for animals and even men So the track here strikes off into a small side Nullah to the north and ascends very steeply over rock and loose stones to the narrow sharp crested dip of a side spur The pass is called Jalkand and is difficult even for lightly laden animals The respect entertained for it on this account by wayfarers is duly marked by the offerings of poles Ibex horns and the like which deck the supposed resting place of a 'Pīr' buried on the rocky crest A distant view opened westwards across a succession of deeply eroded spurs and towards the fantastically fissured Raskoh range which rose high above them in the distance It strikingly recalled to my mind an even more arid mountain region the outer spurs of the Kun lun above Khotan After four miles troublesome descent across numerous smaller spurs and ravines the track regained the bed of the Jal River Its narrow tortuous course lay farther on between wildly cut rock walls (Fig 3) but was followed without difficulty down to the point known as Gwatunk There the little stream intermittently flowing in the stony bed finally disappears and there camp was pitched

Arrival in Nauroz kalat—On the morning of December 11th a march of two miles and a half sufficed to bring us down to where the stony river bed now quite dry debouches on a vast bare peneplain At its mouth some fields amidst clumps of large tamarisks are cultivated by a couple of Baluch families in years when an adequate flood descends the Jal bed and inundates them Here we left the track leading down to Kharan fort and village and struck due west across the bare detritus covered peneplain The line we were following crossed more than one ravine from the hills to the north east but only in one of them not far from the Jal river mouth was some water to be found The spring supplying it was said to dry up after the winter Before we reached Nauroz-kalat the only permanently inhabited place in the whole north eastern portion of Kharan territory we struck the wide tamarisk covered flood bed of the Ghaz kaur and then passed through a desolate belt of low and utterly barren hills So it was a welcome change when from the last rocky ridge we dropped down to the scanty palm groves and fields of Nauroz-kalat by the left bank of the Bado river Since leaving Surab we had covered close on eighty miles without meeting any humans apart from a solitary shepherd in the Siah kumb valley

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SECTION ii—SITES IN NORTH EASTERN KHĀRAN

Search for remains noticed by Pottinger—I had chosen Nauroz kalat as my first objective in Kharan for two reasons From there it would be possible for me to re visit the site of Toji further up the Bado river I had first rapidly examined it on my short tour of December 1904 but had not been able on that occasion to arrive at any certain conclusion as to the antiquity of

its surface remains At Nauroz kalat too I might hope to obtain information as to the position of certain ruined structures which Pottinger had seen in 1810 on his third march from Nushki down to Kharan and which had aroused his special interest The topographical indications recorded by him from what he could observe on his plucky journey performed under conditions of distinct risk and difficulty were not sufficient to permit of the locality being fixed without search on the ground In 1904 want of time had made it impossible for me to extend this search to Nauroz kalat But in my report on that short tour I had expressed the surmise that the ruins might have to be looked for farther down the Bado river than Pottinger's road estimate seemed to indicate

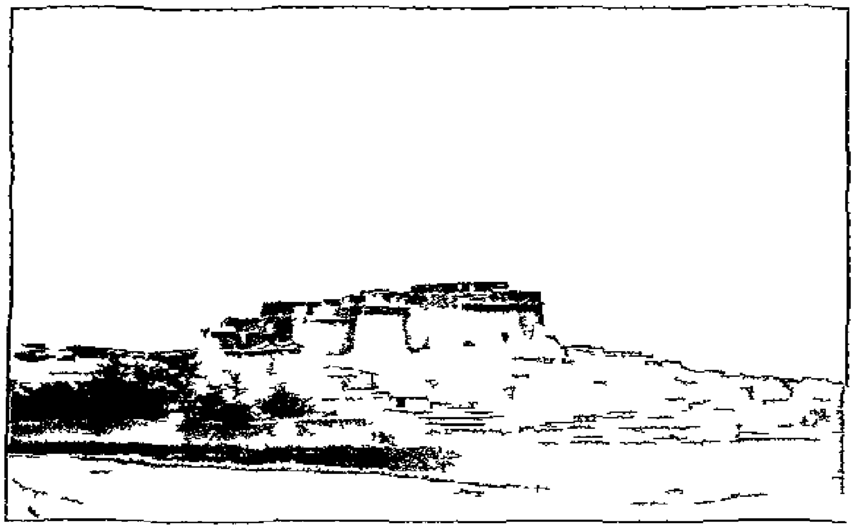
Information secured at Nauroz kalāt—Nauroz kalat is a very small oasis settled only since the time of Azad Khan chief of Kharan in the second half of the last century who constructed a Karez and built a fort there as the residence of his son and successor Nauroz Khan With the ready help of Naib Saltan Khan in charge of this sub division of Kharan who had accompanied us from Surab the local information I needed was secured here without difficulty overnight It clearly pointed to remains corresponding to those mentioned by Pottinger to be found on the route which leads down the river to the chief's seat at Kharan As the latter was to be visited by me in any case I decided first to proceed on December 12th to the Toji site taking with me whatever able bodied men could be collected for digging eight in all

The Toji site.—The site was reached after proceeding for about four miles up the bare gravel plateau through which the Bado river winds in a fairly wide bed filled with scrub and tamarisks It contained at the time a shallow but brisk flow of water some 8 yards wide near the site but this flow is liable to dry up in the summer months Where the course of the Bado is joined from the north east by a wide dry flood bed known as the *Toji kaur* there juts out from the gravel Dasht to the east of the Bado a small detached terrace called *Toji damb* It rises to about 50 feet above the nearest portion of the river bed (see *A* in the sketch plan Pl 1) and is rendered conspicuous by the dark debris of stones and pottery which covers its top and slopes A narrow dip of the ground separates it from the level *Dasht* and a small shallow Nullah intervenes between it and a similar tongue of the plateau to the south east also covered with debris and marked *B* in the sketch plan

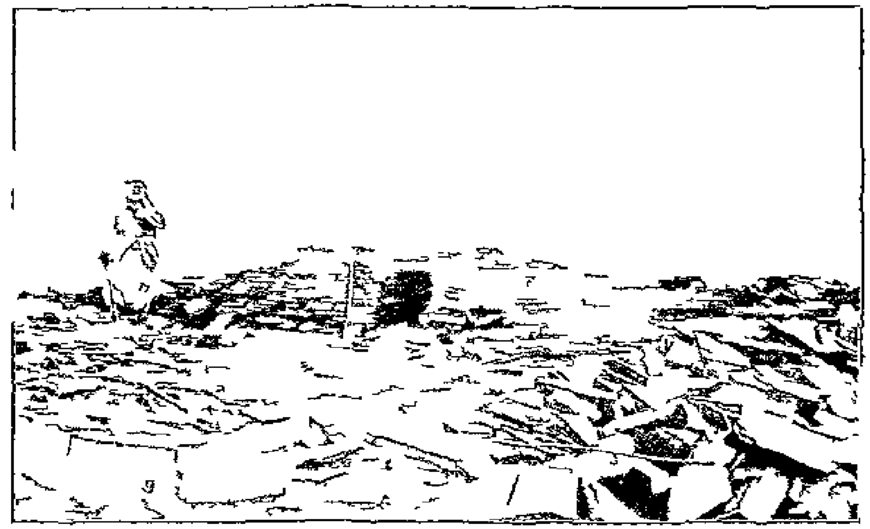
Advantages of site for defence—Round the northern foot of the terrace *A* there bends a well marked small channel obviously scoured by the floods which occasionally descend in the large bed and farther up have produced the steeply cut banks of the Dasht It holds a little streamlet of drinkable water fed by a spring which issues just below the above mentioned dip Fig 4 shows it in the foreground The top of the terrace which measures about

[1] See Pottinger Travels in Beloochistan 1816 p 123

[2] Cf Stein *Report on Archæological Survey work in the N W F P and Baluchistan* 1905 pp 50 sqq



[o FRO bOUT ST



g UR L NCTO UR R D G



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To o n o o

120 yards from east to west and over 70 yards across where it is widest falls off with very steep slopes towards this natural fosse as seen in the photograph The relative height of the top above the streamlet is nowhere less than 30 feet The great advantage for defence offered by these steep slopes as well as by the easy access to water accounts for the ancient occupation of the terrace as attested by remains of walls and the painted potsherds to be described presently

Remains of walls—The steepness of the slopes on the northern face of the terrace made it easy to distinguish the natural strata of gravel and clayey alluvium reaching to a height of about 15 feet from the debris deposits higher up which are due to the decay of rubble built dwellings At one point on the north eastern slope of the terrace marked in Fig 4 by the figure of a man standing a little clearing sufficed to lay bare a wall solidly built with fairly regular courses of large water worn stones set in mud plaster It could be traced for a distance of some 20 feet though broken in places by erosion From its position it might be supposed to have belonged to the foundation of a structure or of a circumvallation erected after an enlargement of the occupied area on the top of the terrace had become necessary

Traces of circumvallation—Further to the west a line of large stones exposed in a row along the edge of the north face of the terrace top indicated the position of another massive wall On excavation this wall was cleared for a length of 18 feet to a depth of 4 feet and proved fully 9 feet thick Erosion cuts had broken it on the east and west but surface indications allowed its position to be traced for about double that length Judging from this and its thickness this wall may well be supposed to have belonged to a circumvallation On a lower level outside it there were struck the foundations of another massive wall running at a distance of about 2 feet but not quite parallel to it The masonry of these walls was of the same type as noted above The abundance of rough stones large and small which lie thickly over the top of the terrace could have been brought there only by the hand of man and clearly belongs to decayed dwellings In some places modern digging done evidently for treasure had exposed the top of walls belonging to small structures as already noted in 1904

Painted pottery—Amidst this debris on the top and also over the slopes there lie plentiful potsherds generally of superior red fabric The same is the case on the terrace to the south west marked *B* where pottery debris alone offers a surface indication of former occupation Most of this ware is plain but a quantity of fragments with painted designs could also be collected with ease The great majority of these show geometrical patterns executed in black mostly over a red or else dark buff ground as seen in the specimens T K 1 6 (Pl I) The patterns such as hachured leaf shapes solid triangles meeting at points hooks arranged in rows above plain bands have all their counterparts in the painted pottery from some of the pre historic mounds of Zhob and Loralai But of painted pieces showing coarse zigzags dots or scrolls in purple or brown over pinkish ground such as are characteristic of

the later of those mounds only very few could be found (see T K 7 9, Pl I) Apart from the scalloped rim on one of the latter pieces no relief decoration is shown by any of the pieces collected But on the other hand a peculiar kind of mat marking familiar to me from some of the early pre historic sites of Northern Baluchistan appears on a number of fragments of rather coarse fabric Pieces of unworked flints and other hard stones were picked up in numbers But only two pieces one a very roughly worked scraper the other a coarse 'point or borer show signs of human use The former was found low down between the two adjoining walls above mentioned

Ruined embankments—At the foot of the little Nullah which separates the two terraces *A* and *B* there runs a massive embankment or *band* built with large blocks of stone and over 8 feet thick Its direction distinctly supports the assumption that it was connected with a similar *band* of equally massive construction and traceable over some 100 yards which extends from the opposite bank of the Toji kaur to the foot of the gravel plateau overlooking it as shown in the sketch plan (Pl I) The object of the embankment was manifestly to hold up and store flood water descending in the wide bed of the Toji kaur for irrigation of the riverine flat which stretches away to the west of it for over one third of a mile Some 200 yards further up there survives for a distance of about 120 yards another old embankment faced similarly with a wall of large boulders It is about 8 feet thick and still stands to a height of 4 to 5 feet above the ground in front of it Its flank rests at the foot of the plateau to the north east Alluvium brought down by rain floods in the ravine which here descends from the plateau to the Bado has filled up the ground above the *band* to the level of its extant height

A hundred yards or so to the north there is found a second *band* of the same type and construction but less well preserved It once no doubt also extended eastwards to the foot of the plateau, but it has been carried away on that side by flood water It is now traceable only for about 50 yards to where it forms a corner and bends upwards Here, too, alluvial deposit has raised the ground behind to a level flush with the present height of the stone dam Traces of old furrows showed that this ground had at some time not very distant been used for cultivation But this is no longer carried on, and the hard soil of the dammed up ground serves only for underground pits in which to store grain whenever crops can be raised by occasional tillage of the fields close to the present channel of the Bado

Construction of 'Gabar bands'—These embankments of the Toji site like all similar stone built irrigation works to be found in great numbers over Kharan and Jhalawan are locally known as *Gabar bands* This designation which ascribes them to the 'Gabars' or Zoroastrians is merely an indication of the great antiquity with which Brahui and Baluch popular belief invests these remains That the construction of such solid stone dams is entirely beyond the capacity of the present inhabitants of this region is certain Nor

does it seem possible to believe that their laborious construction could ever have been undertaken unless to meet the agricultural needs of a population far denser and far more settled than the present one I shall have occasion further on to discuss the interesting antiquarian questions raised by these striking vestiges of the past in connexion with the imposing Gabar-bands examined by me in Kolwa and Jhalawan Here it may suffice to point out that the evidence there discussed seems distinctly to favour the assumption of a close relation in origin as well as in approximate date between the embankments of Toji just described and the remains of the prehistoric settlement in the close vicinity of which they are found

Intermittent cultivation in bed of Bado—No signs of later permanent occupation are to be found anywhere in this neighbourhood But the ground to the west of the Gabar bands is now tilled in years of good rainfall by a few semi nomadic Baluch households At other times too the easy access to water and the presence of good grazing in the beds of the Bado and Toji kaur are likely to have attracted such visitors It is hence not difficult to account for the small groups of burial places found at several points of the plateau which divides the Toji kaur from the Bado They are obviously Muhammadan as the low heaps of stones marking graves are almost invariably correctly orientated from north to south in the orthodox fashion The digging done at one of the stone heaps where the direction differed revealed no deposit of any kind but showed undisturbed soil of hard clay and gravel below three feet of loose earth

Pottinger s reference to site—My renewed and closer inspection of this area left me in no doubt that the remains of the Toji site correspond to the several large mounds of stone and earth scattered over the desert which Pottinger describes as having been seen by him on his journey from Nushki into Kharan along the course of the Bado for the route regularly followed by travellers from Nushki to the chief cultivated area in the north eastern portion of Kharan actually passes by Toji But there still remained the search for the very extraordinary tombs of a quadrangular shape each surrounded by a low wall of curious open freestone work which he mentions at a distance of about 400 yards from the western bank of the river[3] They had puzzled Pottinger greatly as he could trace nothing whatever Muhammadan or Hindu in their style and had judicious doubts also about their having served as Zoroastrian places of worship

Remains near Azad gaz Ziarat—The location of these remains proved easy Local information at Nauroz-kalat knew of ruins on the right bank of the Bado only at one place and that on the way down to Kharan the chief s seat Starting for this on the morning of December 13th we passed after a mile the fort of Nauroz kalat a small but fairly substantial structure built by Azad Khan and less than half a mile farther the point where cultivation near the left bank ends. Then the track crossed the river and led past a stretch

[3] See *Travels in Belochistan* p 126

of abandoned cultivation to a narrow stony plateau which separates the course of the Bado from that of a torrent bed known as Garuk kaur On approaching the junction of the two near the Ziarat of Bibi Azad gaz we arrived after a total march of six miles at the ruins which Pottinger had seen

Enclosures of Muhammadan graves—They proved to comprise three low walled enclosures each containing a number of what are undoubtedly Muhammadan graves All are built on the same plan with walls of fairly regular courses of flat sandstone slabs evidently brought from some easily worked stratum in the near hills and roughly dressed at the ends All have a small prayer niche facing approximately west north west and a very low entrance opposite, as seen in Fig 2 The first of these burial enclosures met on coming from Nauroz kalat stands close by the road side and is the one which has suffered most decay Within a small square of walls standing to about three feet height a heap of earth mixed with burnt bricks marks a completely collapsed small Gumbaz or Muhammadan domed tomb Within old men s memory the little square structure was said to have still stood in a condition recognizable as the resting place of a Pir The well made hard bricks measured 11 by 7 inches with a thickness of 2 inches Bricks of the same kind were found on some of the low little mounds which mark the graves found in the other enclosures

Period of enclosures—Two of these within a few yards of each other, are situated to the north west of the track and about 160 yards from the first They contain each half a-dozen of grave mounds and measure about 39 feet square outside The fourth a little to the south of them (Fig 2) measures 36 feet square outside and its plan as shown in Pl 1 is typical of the rest The entrance passage only 2 feet wide and 2¹ feet high shows small openings on its projecting sides and is roofed with flat slabs Here as in the other enclosures the only decoration of the walls all built without clay or mortar consists of small slatey stones inserted at irregular intervals zigzag fashion in place of a stone slab as seen in Fig 2 by the side of the entrance No local tradition survives as to the origin of the burial enclosures but their Muhammadan character is well recognized I was unable to trace any definite indication as to their period But considering their advanced state of decay and comparatively superior construction I am inclined to believe that they may belong to mediæval times when Kharan appears to have been ruled by Maliks connected with Sistan[4] and may be supposed to have enjoyed a somewhat higher state of civilization than is found there now

Ziarat of holy lady—There can be no doubt that the location of these burial places is due to the sanctity enjoyed by the Ziarat supposed to mark the resting place of Bibi Azad gaz a holy lady It occupies a small hillock at the meeting point of the Bado and Garuk kaur about a quarter of a mile farther on I could learn nothing about this holy person but duly noted that

[4] See *Kharan Gazetteer* p 30

just below her shrine there issues a fine spring fed by the subterraneous drainage of the Garul valley Local worship at such a spot is likely to be older than the introduction of Islam The water from the spring accounts for the cultivation carried on here by three families in this otherwise dreary waste

March to Kharan kalat—Four miles further down the track crosses the Bado to the left bank and on the bare gravel plateau known as *Hadua*[5] passes several badly decayed burial enclosures like those of Azad gaz Others of the same type but far more roughly constructed with mere rubble were found close by and looked like later imitations Some five miles beyond at a point called Bumband the termination of the river's surface flow was reached Here is the head of the chief canals which carry water from rain floods over the arid alluvial plain on either side of the main bed and render intermittent cultivation there possible Following first the westermost of these canals and then crossing an utterly barren stony plain we reached *Kharan kalat,* the 'capital' of the territory from which it takes its name

The capital of Kharan—This is not the place to describe the impressions produced by the little 'town' of mud hovels and mat-huts which clusters around the chief's residence and the stronghold built by his renowned ancestor Āzad Khan Most of them were deserted at the time and towards the spring the chief and his people too are apt to move off to camps on higher ground, generally on the slopes of the Raskoh range This rises northward with fantastically serrated peaks to a height close on 10 000 feet and provides a striking background to the far from attractive scenery of the Kharan capital I was hospitably received by Nawab Habib ullah Khan the present head of the Naushirwani family which has ruled Kharan for upwards of two centuries I found a good illustration of the cultural influence here exercised by Iran in the domed structure serving as Darbar hall and guest house combined which was allotted to me as quarters It had been built in recent years by Persian masons and in its plan closely reproduced the architectural features well remembered by me from manorial structures old and new in Sistan The odd 'Europe' furniture with which it was partly filled had of course been obtained through an Indian medium Together with the building it seemed to symbolize the meeting of two civilizations both foreign to the soil and one quaintly hybridized

Mound of Pir Hassan Shah—During my days stay at Kharan kalat I visited on December 14th the large mound known from the Ziarat it bears on its top as the 'damb' of *Pir Hassan Shah* It is situated about two miles to the SSE Rising above the flat plain cultivated in patches when adequate flood water can be obtained from the Bado it forms a conspicuous object though of no great height It was the only ancient site in this part of the valley of which I could obtain information and is mentioned in the Gazetteer[6]

[5] The map No 34 H seems to [illegible] this local name under the form of Ad gaz while omitting to [illegible] Azad gaz altogether

[6] Cf *Kharan Gazetteer* p 148

The mound occupies ground between two branches of an ordinarily dry flood bed known as Kallun the western one of these in good years allows small stretches of ground at the foot of the mound to be cultivated The mound measures about 600 yards from north to south and about half that across where widest The highest portion near the middle rises to about 25 feet above the level of the fields and is covered with plentiful fragments of burnt bricks These appeared to belong to a ruined Muhammadan structure probably a domed tomb or *gumbaz* their size is 11 × 6 × 1½ inches On a slightly lower portion of the mound to the north is found a rough stone enclosure containing the supposed grave of the saint

Pottery remains of mound—No old structural remains could be traced on the surface But potsherds cover it in abundance and are exposed also wherever erosion has cut into the mound Of painted fragments but few could be found they show simple geometrical designs in black over a red or buff ground (see P H 1 3 11 Pl I) resembling those on painted ware from chalcolithic sites of North Baluchistan All the more plentiful were pieces decorated in relief with flat ribbing (see P H 4-6 Pl I) This type of decoration was found by me in Sistan to be closely associated with sites occupied from the first centuries of our era down to early Muhammadan times it is also well known in Egypt from the Roman and Byzantine periods [7] Of the piece P H 4 it is interesting to note that besides the ribbing it shows also decoration by burnished bands To historical times may probably be ascribed also the few pieces which like P H 7 10 show simple incised ornament and so also the fragment with a handle P H 9 On the other hand the numerous fragments of which the outer surface is mat marked (for a specimen see P H 8, Pl I) are likely to be far more ancient they are all hand made while the rest of the pottery is wheel made It deserves to be noted that we could not find a single piece of glazed ware Judging from these ceramic indications it appears probable that the mound originally formed by prehistoric deposits continued to be occupied during historical times but ceased to be so in the Muhammadan period when the use of glazed ware was common, as shown by the frequency of it at sites of that period in Makran

Departure from Kharan kalat—The presence of this large mound in the close vicinity of Kharan kalat proves that the ground near the head of the deltaic area formed by the Bado Korakan and Garuk flood beds has served since early times for the chief agricultural settlement of Kharan just as it does now I could learn of no other damb of this kind in the north eastern portion of the territory nor does the Gazetteer indicate the existence of any westwards The numerous vaulted tombs or Gumbaz of Muhammadan times which the Gazetteer mentions in widely distant parts of Kharan [8] did not offer sufficient archæological interest to justify the expenditure of time which visits to them would have implied So I felt free on December 15th to leave

[7] Cf Stein *Innermost Asia* i p xxii n, 910 928 i Pl. CXV
[8] See *Kharan Gazetteer* pp 45 sq

the Kharan capital for the journey which as planned at the outset was to carry me south east through the mountains to the Besema tract of the territory There I could regain the motor track which leads to the head of the Rakhshan valley and thus down to Panjgur in the northernmost part of Makran

Domed tomb with relievo slabs —The caravan route to be followed for this journey led on its first long march up to the mouth of the Garuk valley On the way near the huts of the Shiroza hamlet, only 2½ miles from Kharan fort I passed one of those domed tombs It is known as *Ashilo gumbaz* Its fair preservation and the shape of its high dome suggested a late date The upper frieze on the outside of the square burial chamber is ornamented with burnt clay slabs showing in low relief very coarsely modelled figures of camels horses and other animals, such as are described in the Gazetteer as typical of these sepulchral structures in Makran Our start had been much delayed through the belated arrival of fresh camel transport and with the prospect of a long march before us no time was left for closer examination of the structure

Remains at mouth of Garuk valley —For about ten miles the track led across scrub covered waste broken by patches of neglected cultivation or furrowed by inundation channels which at times provide them with water Then for another fifteen miles the march lay up a gently sloping glacis of bare gravel to where the Garuk river bed debouches from the deeply eroded barren hill range Here water left behind by the last rain flood was found in a muddy pool of the bed Of the mound which the Gazetteer mentions at this point as having yielded 'some pottery believed to be of great antiquity to cultivators when excavating for purposes of cultivation [8] I could obtain no information, nor does the ground offer here a chance for tillage But when we had ascended next morning for about 2½ miles along the deep cut river bed I was shown by Murad Khan the Naib of the Besema and Rakhshan tract who accompanied our party and proved thoroughly familiar with the ground much decayed remains of stone walls on the top of an isolated narrow ridge rising to over 150 feet above the bed. They extend for about 170 yards from north east to south west the once occupied space on the top having a maximum width of about 60 yards The rough stone walls evidently belonged to a small fort or place of refuge as indicated also by the stone heaps which marked the position of towers Potsherds lay in plenty over the rocky ridge but were mostly coarse undecorated ware The few painted pieces picked up showed only poorly executed dark stripes or hachures over a buff or pinkish fabric No ribbed or glazed ware distinctive of historical times could be found, but the look of the pottery militated against the assumption of any great antiquity for this small site The natural strength of the position and the presence of a well in the river bed immediately below adequately account for its occupation which was probably intermittent

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[8] See *Kharan Gazetteer*, p 148.

SECTION ii—THE MOUNDS OF BESEMA AND ZAYAK

Two marches on December 16th and 17th carried us southward along the main drainage of the Garuk river to the spring of Drug and the vicinity of the open valley trough known as *Besema* The line followed by this well known track led in the dry river bed or else up and down small side valleys when narrow defiles of the former had to be avoided Everywhere the slopes of the hills passed were uniformly barren Pools and wells could be found along the main bed at intervals but there were nowhere signs of prolonged occupation whether old or recent Only twice we had met nomadic Brahūi households moving up to such grazing as can be found in the higher side valleys eastward

Physical features of Besema —Starting from the spring of Drug on December 18th we passed shallow floodbeds descending from the rugged Jur hills in the east and then arrived after some miles march at the northern end of the tract of Besema It stretches for about thirteen miles from north to south as a wide open valley The almost level portion of the trough keeps an average width of about four miles and lies at an elevation of a little over 4 400 feet near its southern end The naturally fertile alluvial soil of the trough would permit here of cultivation over an extensive area if irrigation were possible or adequate rainfall assured But the numerous floodbeds which descend from the hills on both sides of the valley carry water but rarely, and as they have cut deeply into the soft soil most of the water they bring down would be lost to the cultivator

Nomadic population—Numerous small patches of cultivation were passed as we moved up the eastern side of the valley but no signs of even semi permanent occupation could be sighted The Brahui population claiming land in Besema and shown by the census of 1921 as 732 souls is entirely nomadic living by their flocks and tilling their fields only in years of good rainfall A striking contrast is thus presented to the number of old mounds which rise over the flat ground of the valley attesting prolonged occupation by a once considerable settled population An attempt was made by Nauroz Khan chief of Kharan towards the close of the last century to bring at least a small portion of this potentially fertile area under cultivation But the *Kārez* dug for this purpose towards the mound known as *Kurragi damb* failed as no adequate supply of water was secured

Prehistoric pottery on mounds —The first mound known *Mamman damb* was reached close to the northernmost patch of Khushkaba (dry water) cultivation It measures about 100 by 70 yards and rises to a height of about 10 feet only On the slopes covered with rubble from decayed dwellings pottery remains were scanty But the few painted pieces looked ancient (see M D i Pl I) and a small terracotta fragment evidently from the figure of a humped bull in view of finds made elsewhere distinctly suggests prehistoric occupation Going about 2½ miles south south east we came to the *Kurragi-damb* adjoined by cultivation It rises to some 30 feet and has a diameter of over 120 yards It is thickly covered with stones of which

the plentiful large ones must have been brought for building purposes from some distance the foot of the nearest hills being fully two miles away Most of the potsherds found here are of a coarse undecorated ware But some of the painted fragments like K D 1 2 (Pl I) which show well executed geometrical patterns in black over a red slip manifestly indicate prehistoric occupation

After proceeding about 3 miles SSE and skirting the abandoned Kariz previously mentioned I was shown eastwards a flat patch of ground covered with pottery debris and recalling a Turkestan Tati It was known to my guides as *Kashim damb* Here but a few painted fragments could be found they show a red slip but no distinctive designs apart from lines in black Two small fragments from this spot appear to be decorated with flat ribbing which suggests occupation started or continued after prehistoric times The small mound called *Saiydi damb* about 20 feet high and situated about half a mile to the south was heavily covered with rubble but showed little of potsherds all coarse undecorated ware of uncertain type

Taghazi damb —Far more interesting and varied proved the ceramic remains of the largest of the Besema mounds which was reached at a distance of about 1½ miles to the SSW of the last named It is known as *Taghazi-damb* and adjoined by Khushkaba fields It measures about 140 yards from NE to SW and not much less across its height is about 10 feet Among the plentiful rubble from decayed dwellings which covers the slopes of the mound fragments of painted pottery of a superior kind could be found in abundance The great majority of them show carefully executed designs in black over a dark red slip but there are found also pieces which are decorated with brown or buff designs over a light yellowish or fawn coloured ground (T Z 4 8 10 Pl I) The specimens reproduced in Pl I will help to illustrate the great variety of patterns all geometrical and almost always executed with considerable neatness and freedom Among them quite a number like T Z 1, 2 15 16 19 with their bands of hachured triangles or leaf shapes closely recall similar designs from the early prehistoric sites of Zhob and Loralai There too parallels can be found to scrolls like T Z 3 9 But in addition to these we find here frequent patterns with elegant volutes like T Z 7 13 14 fern like bands (T Z 6) or feathered discs (T Z 17 18) which are not represented there

Character of painted pottery —It is just these peculiar and freer patterns which establish a distinct link between this painted ware of Taghazi damb and that of prehistoric sites traced by me in the Mashkai valley [1] to the south Considering that the distance in a direct line between the nearest of these Sunen and Besema is not much more than about thirty miles this close similarity in peculiarities of ornamental design is easily accounted for If I am led to suggest for the painted pottery of Taghazi damb and that of its type a somewhat later origin than that of sites like Periano ghundai or Sur jangal it is

[1] See below Chap IX sec v

because we meet among it also pieces showing the use in the designs of other colours besides black Thus in T Z 12 we find in addition to black also a kind of terracotta red used over a buff ground with bands of dark purple while in T Z 21 brown lines are painted over buff and a curious hook like black ornament over a red slip Similarly on the fragment of a bowl T Z 20 both purple and black designs appear over the light terracotta ground It deserves to be noted that much of this Taghazi pottery is of a thin and very fine fabric and that in at least one piece T Z 28 neatly burnished narrow stripes are used for decoration as found also on early historical pottery from Sistan [2]

Pozhōi damb—The day s fruitful survey of old sites in Besēma ended at *Pozhoi damb* a debris area situated about 2 miles ESE of the Taghazi damb It occupies the termination of a low natural ridge overlooking the drainage bed coming from the east above Zayak and known as Sajid kaur The ground once occupied and marked by rubble from decayed dwellings and by potsherds extends for about 250 yards from west to east and about 200 yards across But little of painted or otherwise decorated potsherds could be found here The majority show either plain dark green and yellow glazes or else glazed polychrome designs which are likely to belong to the Muhammadan period But a few small fragments have painted patterns resembling specimens from Taghazi damb It agrees with the continued later occupation which the ceramic evidence indicates for the Pozhoi damb that here the lines of rough stone walls could still be distinguished on the surface of the top and slopes

Arrival in Zayak—The day s march brought us by nightfall to Zayak, a side valley to the east There near the head of a little streamlet fed by a perennial spring we struck again the motor track leading to Panjgur and found the lorries with all spare baggage duly arrived from Surab at the rest house called Jangal The shelter it offered was doubly welcome after the bitterly cold north wind which had pursued us all day and welcome too was the abundance of fuel which the low tree growth around this rest house offers and which accounts for its designation

From the rest house I visited on December 19th the two mounds which had been reported above the spring of Zayak They proved to be situated about two miles to the NNW and up the open valley which descends from the Katgah pass on the road towards Surab On the way we passed the completely filled in pits of an old Kariz said to have been abandoned long before living memory The northern one of the two dambs was found to rise above flat ground of hard alluvial soil cut up by numerous small ravines Occasional inundation from the flood bed of the Sajid kaur which gathers here and turning westwards passes down to the Besema trough accounts for the character of the ground and the small patches of khushkaba cultivation to be found here

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[2] Cf *I ner* [illegible] i p 938

Northern mound of Zayak —The mound completely isolated rises to a height of 35 feet above the present level of the clayey plain around It extends with quite irregular outlines for about 180 yards from north to south and shows a maximum width of about 100 yards at its foot Examination of the fissures which erosion has cut into the ground near by clearly showed that the foot of the mound has become buried under alluvial deposit to a considerable extent and that the height of the mound must originally have been greater For those fissures down to a depth of over 10 feet below the present ground level showed strata of rubble which could only have been washed down from the mound and embedded in the alluvial clay long after the decay of the structures once occupying it

Types of decorated pottery —The top and slopes of the mound are thickly strewn with stones large and small, once serving as building materials and with potsherds Among these painted pieces abound showing mostly designs executed in black over a fine red ground Particularly frequent are rows of up curving hooks and scrolls (*Z N 1 3 6 Pl I*) as well as hachured geometrical patterns (Z N 3 9) Z N 8 14 are specimens of similar patterns more rarely painted in black or buff over a whitish grey or fawn slip Quite by itself stands the fragment Z N 7 which combines a string ornament in relief with volutes and other elaborate designs executed both in black and red over a light fawny ground wash Style and polychrome decoration suggest later origin for this piece and the same may be assumed also for most of the relief ornamented fragments of which Z N 10 11 13 are specimens [3] That the locality marked by the northern Zayak mound continued to be occupied into historical times is proved by the occurrence of ribbed ware of which Z N 12 is a specimen Finds of this were comparatively frequent on a slightly detached portion of the mound to the north Of glazed ware only a single small fragment could be discovered lying on the surface at the east foot of this portion it shows a freely treated pattern of brown and green spots over yellow ground

Chips and cores of chert and other hard stones could be picked up in plenty on the slopes of the mound But only a few small stone blades [4] are clearly recognizable as artifacts These together with a small piece of copper confirm the conclusion to be drawn from the majority of the painted fragments that the occupation of the site goes back to chalcolithic times That it continued also later is equally evident To which period two small stone beads belong is uncertain

Chalcolithic pottery on S W mound —At a distance of about 300 yards to the south west of the mound just described there stretches a low ridge in the direction from NNE to SSW Its highest point northward rises about 35 feet above the alluvial flat to the east westwards it merges gently into rubble covered little plateau which the floodbed coming from Katgah skirts

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[3] The voluted band in Z N 10 distinctly recalls similar relief decoration common among the later Dabar Kōt ware see *Baluchistan Tour* Pl XV

For about 300 yards the ridge is covered with potsherds and with stones all clearly marking that this strip of ground was once occupied by dwellings for a prolonged period The painted pottery found here in plenty agrees closely as the specimens reproduced in Plate I show, with that of the mound to the north in fabric and type of decoration Amongst the patterns almost all executed in black over a deep red slip scrolls of volutes and hooks (Z W 2 4 8 9) prevail Of special interest is the 'Sigma ornament (Z W 1) familiar from the painted pottery of chalcolithic sites of Northern Baluchistan, Sistan Tepe Musian etc [4] The geometrical design of Z W 7 painted brown over light cream recalls the type of Nal ware [5] Of two fragments of coarsely made terracotta figurines Z W 5 (Pl I) seems to represent the head of a horse, the other perhaps a human trunk (?) Also small fragments of worked copper were found here From all these indications it appears safe to conclude that the occupation of this ridge was coeval with that of the mound

Small stone enclosures —On the small plateau to the west, little roughly circular enclosures of stones only a few feet across could be traced in numbers for about 200 yards from the northern end of the ridge They recalled those funeral cairns' of similar appearance which at *Moghul ghundai* in the Zhob valley had proved to mark a burial ground of early historical times [6] It is probable that here too the purpose of these stone circles was the same, but the few we could clear contained only soft earth without any deposit of bones ashes or objects Of the fragment of a dark blue glass bangle which was picked up on the surface of this ground the age cannot be safely determined

Change of physical conditions —Both the northern mound of Zayak and the Taghaza damb would have strongly tempted trial excavation had it been possible at this season to secure even a minimum of local labour commensurate to the task The total absence of a settled population either in Besēma or anywhere else within a radius of thirty miles if not more obliged me reluctantly to forego the attempt But it also served fully to bring home to me the great change which has come over this region since prehistoric times It seemed impossible to assume that the Besēma tract could have afforded subsistence to such a number of agricultural settlements as the mounds above described presuppose as existing during approximately the same prehistoric period, if the physical conditions then prevailing had been as unfavourable as they are now The much discussed geographical question of climatic change or 'desiccation had from the start helped to draw my attention to these arid Gedrosian regions It was hence of special interest to me to find myself here at an early stage of my explorations brought face to face with antiquarian evidence which distinctly pointed to the local climate having undergone a great change since chalcolithic times in its effect upon cultivation

[4] See e g N Baluch Tour Pl X p 73 XI MM X 9 10 MM E 6 XIII R G 6 Innermost Asia Pl CXIII CXIV Arne Painted Stone Age Pottery p 90 Fig ...

[5] See below p 10 sqq

[6] See N Baluchistan Tour Pl 40 19 also below Chap X ...

CHAPTER III.—OLD SITES IN RAKHSHĀN AND PARŌM

SECTION i.—REMAINS AT THE HEAD OF RAKHSHAN

On December 20th we set out by motor from Zayak on our way into the Rakhshan valley. Nag, fully 65 miles away, had to be fixed for our initial stage, as it is the first permanently inhabited place in it and also because at the only two points where *dambs* were reported to exist near the route no water could be found. Right down to Nag the ground traversed by the route now belongs politically to Kharan. But as the division here drawn between Kharan and Makran is not based on geographical facts but only upon the limit which the establishment of the *Pax Britannica* towards the close of the last century fixed to the southward expansion of the Naushirwani chiefs, it may be here disregarded.

Across head of Reghai tract.—After skirting the southern extremity of Besema the road led through a maze of utterly barren hills and across the Kaparna pass to the arid plateau at the head of the Reghai tract which is drained by floodbeds feeding the Dhutori. This itself belongs to the headwaters of the Mashkai river which, flowing due south through Jhalawan, ultimately finds its way to the ocean as the Hingol. Thus on this plateau there meet two natural cross-roads leading from Southern Persia to Kalat and the Indus and from the sea to Kharan and the Helmand valley. But on that day's drive we met no humans but two Brahuis grazing their flock of sheep and goats near the well of Patakin, the only one passed.

Mounds of Badrang damb.—Where the route about halfway to Nag first touches a stretch of *Khushkaba* cultivation[1] not far from the almost imperceptible watershed towards the Rakhshan drainage, we reached the group of low mounds known collectively as *Badrang damb*. It extends over some 360 yards from north to south and about as much across. The average maximum height of the mounds is only about 10 feet. But as the level of the ground around has certainly been considerably raised by alluvium from the floodwater brought here for the sake of cultivation in years of good rainfall, probably much of the lower portion of the mounds is buried below the soil.

Chalcolithic potsherds.—Over the whole area pottery debris is strewn in plenty and among it very numerous painted pieces showing prehistoric patterns were picked up. The specimens reproduced in Pl. II will help to illustrate the most frequent motifs. Among these the hachured leaf shapes (B R. 1, 2, 4, 15), the *rows of solid lozenges between horizontal bands* (B R. 5, 6, 12), the hachured geometrical forms (B R. 8, 9) have all their exact counterparts among the painted ware of the earliest Zhob and Lōralai sites.[2] There too

[1] The position is approximately marked on Map No. 35E, B 1, by the entry *Nok-chah*. The name is locally unknown and probably refers to some well in one of the side valleys descending from the ranges which enclose the head of the Rakhshan valley.

[2] Cf. *N. Baluchistan Tour*, Pl. V, VI, XI, XX.

is found the Sigma motif of B R.3 The concentric squares and polygonal shapes of B R 16 17 17*a* as well as the parallel wave lines of B R 7 recur at Rana ghundai [3] But it deserves to be noted that the fine red ware with black patterns of those early sites is rare at Badrang damb while buff grey light cream coloured grounds or slips prevail and the designs are generally painted in coarse browns or purples Of relief ornamentation only narrow parallel wave lines as in B R 18 could be found Only a single glazed fragment with a hatched pattern in brown and green over yellow turned up and that too close to a Muhammadan graveyard adjoining the western edge of the site The ancient painted potsherds which lay on some of the graves had evidently been found while digging these [4]

Absence of water —Considering the extent of the debris strewn area and the size of the ancient settlement which it indicates the total absence of any permanent supply of water in the wide valley plain around the site is significant This ground is temporarily occupied only when a good rainfall allows Brahui nomads to till the patches of Khushkaba land near by and then water may be found for a time in pools of the neighbouring Patakin flood bed If there is a crop to reap and the pools have dried up water would have to be brought in skins from distant wells or waterholes in the hills The same arid conditions continued when after crossing the divide we moved down the wide open valley of the Nag river which is one of the principal feeders of the Rakhshan No water was to be found until camp was reached at the point where the road passes within a couple of miles of Nag village There springs gather in the bed as it passes through a low chain of hills Hence it was impossible to halt at the site of *Kaigushki damb* which was reached after about 20 miles from Badrang damb But the rapid survey I was able to make of it sufficed to show its interest and I accordingly returned to it from Nag camp on December 22nd for closer examination

Kalatuk damb of Nag —On the day following my arrival at Nag camp I proceeded to the small village of N g situated where the little spring fed stream debouches from the defile already referred to Of the several dambs which had been reported close to the village the chief one is situated as the sketch plan in Pl 2 shows close above the left bank of the wide sandy flood bed of the river and near the easternmost patch of ground that is irrigated from the permanent streamlet meandering within it There a stony plateau between the river bed and the foot of bare rocky hills is covered with the debris of rubble built walls and with potsherds This area of ancient occupation measuring about one third of a mile from SE to NW and about 300 yards across where widest is known as *Kalatuk damb* (the fort mound) from the rocky hillock rising at its north western extremity to a height of about 100 feet above the river bed It is a naturally strong position and is crowned by ruined stone walls of very rough construction and probably modern

[3] See *Ibid* Pl XIII

[4] For a similar observation at the prehistoric mound of P r Al za cf *Ibid* p 8

Painted pottery and terracotta figurine.—Traces of ancient walls built with roughly squared freestone and resembling those to be described below in connexion with the Kargushki damb crop out on the surface of the site below. But more evidence of very early occupation is supplied by the plentiful painted potsherds found there. Most of them, as seen from the specimens reproduced in Pl. II, show geometrical designs painted in black over a dark red or buff ground. Though the execution is on the whole coarser than in the case of the painted pottery at the prehistoric sites discussed in the preceding chapter and at those visited in Zhob and Loralai, yet close relationship in the decorative motifs is unmistakable. Of peculiar interest is the ornamentation with rows of large horned animals, probably representing ibex in a bold pose, found in N.K. 2,6; also the appearance of parallel bands with close-set upright strokes, N.K. 5, 8, 9, which the recurrence of a similar motif in larger and better preserved specimens from other Makran sites permits us to interpret as meant to represent grass or scrub.[5] But the most interesting object picked up at Kalatuk damb is the small bird-like head of terracotta N.K. 4.a. (Pl. VI); it belongs undoubtedly to a very primitive rendering of the female figure found as a draped bust at the chalcolithic sites of Periano-ghundai, Moghul-ghundai, Surjangal, etc., and evidently representing a goddess.[6] We shall have occasion to meet with far more numerous terracotta figurines of the same type at chalcolithic sites of Makran and Jhalawan to be discussed further on.[7]

Mound near Nag village.—At a distance of over half a mile from the Kalatuk hillock and on the opposite bank of the river bed lies the village of Nag. Though it is the only permanently occupied place in Upper Rakhshan, counting some two dozen dwellings and palm-mat huts, not more than ten able-bodied men could be collected in it for the morrow's proposed trial excavation at Kargushki damb. All the rest of the Brahui inhabitants were away with their flocks in the hills where grazing and firewood for protection from the winter cold are more easily obtainable. An orchard owned by a relation of the Naushirwani chief of Kharan and irrigated by a canal from the stream is, with its date palms, mulberry trees and vines, the only attractive feature of the little oasis. About 200 yards to the north of it I was shown a second 'damb', now for the most part occupied by Muhammadan graves clustering round the tomb of a saint known as Pir Mazam. That this low swelling of the ground marks the position of an earlier settlement was indicated by a few small fragments of painted pottery which bear patterns of the prehistoric type. But far more numerous were broken pieces of glazed ware, plain or decorated, which looked mediaeval.

Ridge of Singi Kalat.—Proceeding half a mile eastwards up the valley and across a low rocky ridge we reached the third 'damb' of Nag close to the right bank of the river bed. Here plentiful pottery debris lies around the foot and on the slopes of a steep rocky ridge about 75 feet high and known as

[5] See below pp. 122, 159.

[6] See *N. Baluchistan Tour*, Pl. IX, P. W. 5, 9; Pl. XII, K. 14; XVI, T. N. D. 9; S. J. 09.

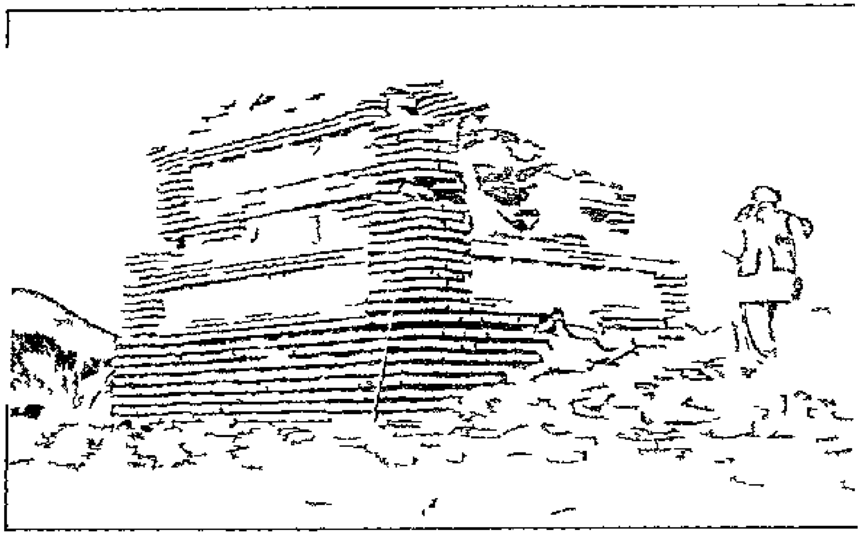
[7] Cf. below pp. 126, 156, 160 sqq., etc.

Si gi l alat the rock fort The very narrow top of the ridge is flat for about 60 yards and has been enlarged to the south by a roughly built but massive terrace of stones which looks old Part of the crest bears a sangar made of stone heaps and evidently recent Besides plain pottery of good make fragments of ribbed ware as seen in the specimens N S 1 3 (Pl II) are here very frequent Together with the piece N S 4 showing incised decoration and a moulded handle these ribbed potsherds clearly point to occupation of the small site during comparatively early historical times It deserves to be noted that not a single ribbed fragment was found at Kalat ik damb

Tomb of Bib Ziarat—On our way back to camp I visited on a low bare ridge about a mile to the south west of Sing kalat the ruined tomb known as B bi ziarat (Fig 5) Built with burnt bricks and decorated with panels of carved bricks showing geometrical relief patterns over a sunk ground it is a typical specimen of the style of decoration to be found on Muhammadan sepulchral structures in Kharan and Makran apparently dating from late mediaeval times Within the little tomb chamber a corpse was exposed to view still retaining rags of its cotton shroud or vestment

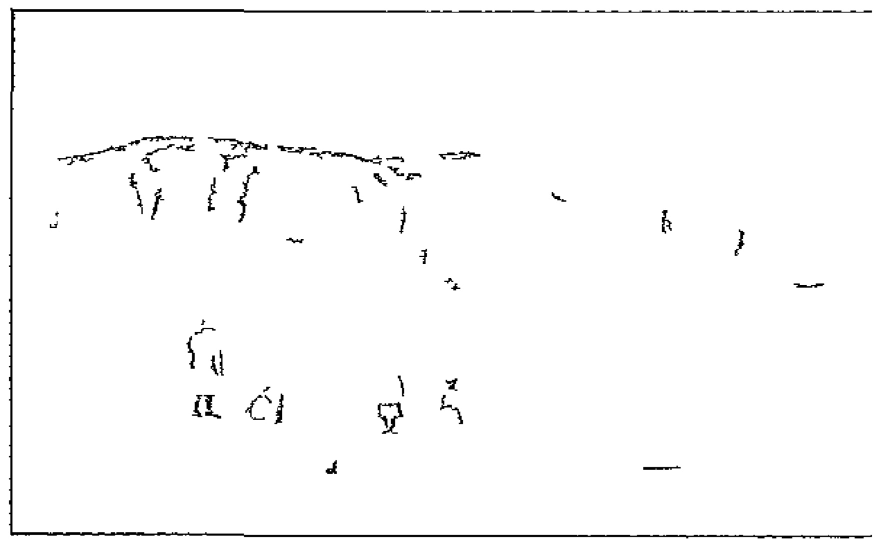
Kargushki damb—On December 22nd I returned for a renewed examination of the *Kargushki damb* which on our way down to Nag could only cursorily be inspected The motor lorry allowed me to take along the ten men collected at Nag village for a short trial excavation This extensive mound is situated up the valley a little over 11 miles from the point where the bed of the Nag river passes into the defile above mentioned It rises about half a mile to the east of the road and though not more than 40 feet high forms a *consp cuous* object in the wide flat plain of the valley At an average distance of some 120 yards its western foot is skirted by the dry bed of the Nag river As the plane table survey reproduced the sketch plan of Pl 3 shows the length of the mound from north to south is about 530 yards and its width where greatest some 360 yards Its slopes towards the river bed are steeper than those to the east and on both a considerable amount of fine drift sand has collected in eroded small Nullahs this extends also over the mostly flat top

Extent of ancient occupied area—The surface is throughout covered with flat pieces of freestone mostly small the debris of walls such as were found to crop out in at least three distinct places on or near the top Wherever the accumulation of drift sand is slight or absent potsherds are exposed in plenty on the slopes Their presence can be traced also over a considerable portion of the level ground around the mound *especially* to the north and north east The total area of ancient occupation thus *indicated* extends over about 900 by 550 yards to the east of the river bed But also on the right bank of the bed such debris can be traced for a length of some 400 yards A portion of the once occupied ground between the northern and western foot of the mound and the river bed is used for Khushk ba cultivation The low earth embankment which the plan shows along a stretch of the left river bank serves to catch whatever rain water may descend the western slopes of the mound Similar patches of precarious cultivation are to be found scattered for a









considerable distance both above and below the Kargushki damb and on both sides of the flood bed But there is none of it on the right bank just opposite to the mound and here potsherds could be picked up in places right up to the road which keeps to a slightly higher level At one point a small eroded terrace resembling a Yardang of the Tarim basin bears scanty remains of walls of the same construction as those excavated on the mound

Walls cleared —Already on my first rapid inspection of the mound my attention had been attracted by a line of stone masonry cropping out on the western slope amidst debris at a level of about 6 feet below the top of the central portion of the mound Some slight digging had evidently been done along it at one time or another The excavation carried out here on December 22nd resulted in the clearing of walls belonging to one structure *A*, which extended over an area of about 40 by 35 feet and comprised at least four separated apartments The plan in Pl 3 will explain their disposition and the photograph in Fig 7 illustrate the character of the masonry used for the walls It consists of small slabs of freestone of varying thickness but rarely exceeding 8 to 10 inches in length set in fairly uniform courses with soft plaster of clay to secure cohesion The fact that the average thickness of the walls is only 1 foot and 6 inches and that along the east side of the rooms *a* and *b* the walls were still standing to a height of over 8 feet proves the solidity of construction The thickness of the wall dividing the small passage c from room *d* is only 1 foot 3 inches It was interesting to note that in the rooms *a* and *b* the walls were provided with plinths varying from 2 to 9 inches

Rooms excavated —In these rooms the excavation along the wall on the east side was carried to a depth over 8 feet from the extant top of the masonry without striking a recognizable floor But the remains of a large pot of coarse make 1 foot 8 inches in diameter found at that depth in *a* close to the wall dividing that room from *b* showed that the floor could not have lain much lower The walls to the west being on the slope were found broken much lower down The narrow passage c only 2 4 wide appears to have given access to interior rooms of the structure but these could not be cleared with the few available men A low doorway leading to this passage from the north could still be made out The masonry of small stone slabs above the entrance had rested on timber of which the charred and rotted remains were traced *in situ* Both in room *a* and beyond room *d* there were found walls of rougher construction possibly later additions That the ground occupied by the structure *A* had been built over later is made probable by shallow wall foundations traceable on a higher level close by These rested on loose earth and debris from completely decayed earlier dwellings

Painted pottery —Similar material filled the interior of the rooms excavated Embedded in this material were found numerous pieces of painted pottery and these may claim distinct interest on account of the stratigraphic evidence they afford In room *a* there turned up comparatively large fragments of four different painted vessels at approximate levels of 3 to 5 feet above the probable flooring The style of their decoration geometrical

throughout shows close affinity, though the motifs and their arrangement vary Of the wide mouthed bowl Kar a 1 the four pieces found (Pl V) fit together, showing that the diameter could not have been less than 2 feet The decoration is executed in dark brown over a light cream coloured slip which may have been applied after firing for both this ground colour and the design over it have been affected by damp and are liable to suffer by rubbing The decoration consists below the rim of the mouth of three narrow bands of lozenges separated from each other by four parallel rules Lower down are two uniform courses of interlacing garlands the junctures of the descending and ascending loops being covered in each case by large oval ornaments The courses are divided from each other and edged above and below by plain parallel rules

Decorative patterns—The pieces Kar a 2 3 (Pl V) closely resemble the above in colour treatment They also show below the rim courses of linked lozenges between parallel rules But owing to the way in which two sides of the lozenges are elongated by strokes, a freer treatment of the lozenge motif is introduced In Kar a 3 we have a second course of lozenges and below this a course of concentric quadrangles separated from each other by a kind of triglyphs In Kar a 2 the place of the second lozenge course is taken by a band of open triangles and the rest is missing In the bowl *fragment Kar a 4*, Pl V, which lacks the mouth we find first a course of open triangles and below, separated from it by parallel rules a broad band comprising a pair of vertically arranged hachured lozenges flanked on either side by dark streaks and hachured triglyphs Kar a 5 (Pl II) is a fragment of a smaller bowl which evidently bore a similar decoration above its foot

Resemblance to Nal pottery—Most of the smaller painted potsherds excavated *in the several rooms of the structure agree with* the pieces already described in having their designs painted over a light coloured slip or ground wash which appears to have been applied after burning and is affected by damp or rubbing Among them the pieces Kar a 5 6, Kar c 1 *(Pl II) are of special* interest because they show very close affinity to the painted ware recovered from the Nal necropolis by Mr Hargreaves and others, both in the patterns and their multicolour treatment Kar a 6 still shows red and green washes, *though much effaced used to fill* in different parts of the designs The same is the case with the other two fragments In Kar b 1 4 *(Pl II)* the patterns are painted in brown on a light buff ground which resists damp, and the motifs are such as are found at sites where the ware of 'Nal type' is absent By itself stands the small fragment Kar b 9 *(Pl II)* It is of a very fine black fabric and shows a wheel like motif round a small raised centre With these exceptions and that of some fragments of small flat bowls which have a *plain* black or dark brown *paint applied* before burning the rest of the painted pottery excavated shares the general characteristics above indicated The evidence afforded is important because the conditions in which these pieces with more or less evanescent colours were found excludes *the* idea of this kind of colouring having been applied solely to vessels for *funeral* purposes By itself stands also the very small fragment, Kar b 12 less than an inch in length which

shows on both sides remains of a mat green glaze It was found about 2 feet below the surface of the slope Whether it can be considered co eval with the latest occupation of the mound must remain doubtful at present

It is obvious that the painted ware found in a structure almost at the top of the mound must belong to vessels actually in use during the latest occupation of the site It is equally certain in view of observations made else where that this period was a prehistoric one In order to ascertain what deposits from preceding periods may be contained in the lower strata of the mound extensive excavations would be needed and for such the labour ob tainable at the time was wholly inadequate This task likely to yield very instructive results had therefore to be left for some future archæological visitor of the site

Prolonged prehistoric occupation —The search made by me for such indications as surface finds might furnish regarding earlier periods of occupa tion was much impeded by the drift sand which covers most of the slopes and the ground around But enough of painted potsherds were collected to show that the prehistoric stage of occupation marked by the finds in the rooms excavated must have been a prolonged one For among the painted pieces collected from the surface of which Pl II reproduces spec mens those corre sponding in type to those finds were the more numerous (see Kar 4 8) Frag ments such as Kar 1 3 which show simple geometrical patterns executed in black or brown on a reddish clay apparently without a slip or ground wash may be earlier This I think can safely be assumed of Kar 9 which shows a neatly drawn hook design over a fine dark red slip such as is common at the early prehistoric sites of Zhob and Loralai It ought also to be noted that among undecorated potsherds those showing a carefully levigated and well burnt clay with a dark red or brown surface were very frequent Judging from what experience at prehistoric sites of Northern Baluchistan has taught me such superior plain ware is likely to belong to earlier prehistoric deposits From the fact that we did not come across a single potsherd with ribbing or other relief decoration it seems safe to conclude that the site was abandoned before historical times What the direct cause of this abandonment was it is of course impossible to say But so much is clear that no settlement of such size as the extent of debris area indicates could continue to exist here since the physical conditions of the ground have assumed the extremely arid aspect they now bear

SECTION ii —IN THE PANJGŪR OASIS

December 23rd saw me on the road to Panjgur It was important for me soon to reach this chief northern oasis of Makran because only about Christ mas could I feel reasonably sure to find Captain D R Smith Assistant Political Agent Makran and Commandant of the Makran Levy Corps at his Panjgur headquarters and thus conveniently to secure in advance all the local advice and assistance I felt in need of before starting my work in Makran There

was nothing to detain me on this journey of some 82 miles, for the portion of the Rakhshan valley along which it led is throughout as barren as it is wide and lacks opportunities even for such precarious cultivation as is met with above Nag

'Damb' of Mayal chah—The only place with marks of former occupation of which I could learn was a 'damb' passed by the road some 2 miles above the lonely well of *Mayal chah*. We reached it after skirting low broken hills for about 8 miles from our Nag camp. There at the mouth of a small side valley there extends a little trough holding potentially fertile alluvium. A low rocky eminence rising within it is proved by the plentiful coarse pottery which covers it to have been once occupied. No painted potsherds were found among it beyond two fragments showing only black bands over buff ground (M Ch I, Pl II) and affording no chronological indication. But there were traces of a wall on the rocky crest with masonry resembling in type that found on the Kargushki damb

Further on the road throughout leads across a dreary succession of Nullahs descending from the ranges on either side of the valley and over stony plateaus between. The floodbeds which furrow the latter, just like the bed of the Rakhshan river itself are too deeply cut into the valley bottom to afford here a chance for cultivation be it only of the Khushkaba type. On the day's long drive we met only two nomadic families before at Senkoran we reached the uppermost of the string of small villages all ensconced amidst date groves which together are known as Panjgur. They extend at intervals along both banks of the river for a total distance of about nine miles

Arrival at Chitkan—At Chitkan the centre of the whole oasis I found Captain D R Smith just arrived at his headquarters from a long tour along the Makran Levy posts towards the Persian border and received a very kind and hospitable welcome from him. The local information which the friendly help of this active and experienced political officer promptly secured for me made it possible to visit during the next few days whatever objects of antiquarian interest Panjgur has to offer. I subsequently derived great benefit from the arrangements he kindly made at the different border posts held by detachments of his Corps in order to facilitate my survey of any ancient remains to be found in their vicinity. The escorts from the Makran Levy Corps which under Captain Smith's orders were provided for my camp while moving along the Persian frontier and on my prolonged tour in the Dasht tract proved very useful in various ways besides assuring complete safety. For all this help and the valuable support accorded to me through the exercise of his influence with the local authorities of the Kalat State I wish to record here my heartfelt thanks

Irrigation of Panjgur—In Chapter I it has already been pointed out that Panjgur owes its importance as the chief centre of population in the northern part of Makran entirely to the fact of a permanent supply of water for irrigation of its lands being assured from Karezes and from pools in the river bed which springs and flood water fill. In the absence of reliable records it is not possible to determine how far back in historical times the existence of Karezes

may go. But it is obvious that the configuration of the ground from the point where the Rakhshān river some miles above Serikoran emerges from a confined bed into a wide riverine flat must here at all times have facilitated cultivation and hence also the settlement from an early period of a larger population. It must therefore seem strange that no mounds definitely proving prehistoric occupation could be traced by me at or near Panjgūr.

Absence of prehistoric mounds.—As so often in the case of negative facts it may seem risky to attempt an exact explanation. But in any case two local observations deserve to be kept in view as possibly bearing on this fact. One is that owing to the flatness of the ground the riverbed within the Panjgūr area is liable to considerable shifts in the event of exceptional floods. Such changes would easily again and again obliterate the debris deposits of ancient village sites. The other observation relates to the peculiar way in which the conditions connected with permanent irrigation and intensive cultivation such as is practised in oases like Panjgūr and Turbat affect the distribution of homesteads. Throughout these oases I noted that the cultivators' huts or mud hovels almost invariably are placed far apart from each other and always within the individual plots of ground where they raise their several annual crops amidst clumps of date trees. Close agglomerations of dwellings or huts such as may be found in localities where cultivation is dependent on rainfall and is necessarily carried on over greater stretches are conspicuously absent in these oases. If we are justified in assuming that similar conditions of tillage and occupation prevailed on this ground already in early times the absence here of prehistoric mounds such as only accumulation of debris from prolonged occupation at close quarters would produce could be more readily accounted for.

Mound of Kohna-kalāt.—Yet Panjgūr does not lack altogether 'dambs' marking ruined sites. The most conspicuous among them is the mound known as *Kohna-kalāt*, the 'old fort'. It is situated about 1½ miles to the south of the date groves of Isai-kalāt village on the left bank of the river. Local tradition points to the seat of the Maliks of Makrān having stood here during late mediæval times and after,[1] and examination of the mound fully confirmed this dating of its occupation. The mound (Fig. 8) rises to a height of about 30 feet above the level of the fields around. On its top it measures about 160 yards from north-east to south-west, with a maximum width of about 35 yards across. On the eastern slope which erosion and digging for manuring earth have cut away steeply walls of sun-dried bricks are exposed on most of the height. Among the pottery debris embedded in the mound glazed ware is plentiful. Apart from plain green or dark blue pieces some fragments showing designs in dark outlines over brown or green glaze were also picked up (see P.K. 1, Pl. II). Pieces decorated outside with ribbing (P.K. 2) or inside with burnished lines (P.K. 4) may also be assigned to Muhammadan times. Only a few specimens of painted pottery were found with coarsely executed black designs easily distinguishable from prehistoric ware.

[1] See *Makrān Gazetteer*, pp. 306 sq.

Much eroded low mounds covered with potsherds were traced for about one third of a mile to the north and north east of the ruined fort Here too glazed potsherds, plain or decorated, like the specimens P K a 1 4 (Pl II) indicated mediæval occupation Muhammadan graves edged with large mud bricks were exposed to view on the bank of the bed which a flood channel from the river now dry had cut into this 'Tati' like ground on the north-west

Site of Chiri-damb—Indications of far earlier occupation could be traced on another area of the 'Tati' type which was visited near the right bank of the river below the present limit of cultivation of Tasp village and opposite to Isai kalat It is known as *Chiri damb* and stretches down not far from the river bed for about half a mile The river was said to have encroached here a good deal on land formerly cultivated Here it was possible to pick up small painted pottery fragments showing prehistoric patterns in black like P Ch 1 2 (Pl II) by the side of glazed potsherds plain or decorated manifestly mediæval for a small specimen showing remains of green glaze over neatly executed relief ornament see P Ch 5 (Pl II) Here too for the first time in Makran I came across again a small fragment of that fine grey ware with black design of which rare specimens had been found by me at prehistoric sites so far away as Zhob and Sistan [2] Among other relics left here by early occupation were a number of small stone beads acquired from a local villager, some of which show decoration with a very ancient method of white inlay,[3] and a stone scraper The small terracotta figurine, P Ch 3 (Pl VI), showing a female bust with arms akimbo has also its *pendants* at prehistoric sites Pieces of ribbed pottery serve to bridge as it were the wide gulfs of time between all these small relics

Sari damb—At the upper end of Tasp village I had occasion to see a Muhammadan tomb probably late mediæval decorated with blue enamelled panels which show figures of animals very coarsely executed in relief Similar decoration of tombs was said to be found elsewhere in Makran Where the last palm groves of Tasp down the river bank stand I was shown a small mound about 12 feet high known as *Sari damb* Judging from the decayed stone walls its top had evidently been used as a place of defence in modern times There was no pottery debris to afford evidence as to the age of the strata below

'Dambs' above Chitkan—Long rides from Chitkan, the Panjgur head quarters enabled me to inspect whatever 'dambs' were reported up the river The one shown between the upper end of Senkoran village and the road proved a low stony plateau strewn with scanty coarse pottery As apart from a single fragment with black rules no painted pieces could be found nor any ribbed ware late occupation appeared probable But a small stone flake found here shows signs of use About 5 miles further up I visited a stony ridge rising to about 50 feet above the riverbed and known as *Damb i-dambi* It lies a little beyond the isolated patch of fields called Bairan dan, which marks the uppermost extension of Panjgur cultivation Remains of rough

[2] [illegible] pp 9,7 sq

[3] [illegible] technique of these [illegible] Mesopotamian finds cf Mr Mackay's paper in J R A S 1925, p [illegible]

stone walls could be traced here, proving former occupation. But what scanty plain pottery was found afforded no chronological indication.

Debris areas of Sraduk and Besham.—About a mile away to the west across the wide bed of the river a small date grove marks a patch of former cultivation known as *Sraduk*. It was said to have been abandoned some 25 years ago owing to the drying up of two Karezes. About 400 yards to the west of it there is reached a low plateau extending for about 300 yards from north to south and about 200 yards across. Among the heaps of rubble which cover it coarse plain pottery is plentiful. Among the few painted potsherds found at this damb there are two (see Srad. 1, Pl. II) which by their hachured black patterns applied on buff ground suggest prehistoric origin. Fragments with simple incised ornament like Srad. 2, 3 (Pl. II) may also be early. A few glazed and ribbed pieces indicate occupation down to mediæval times. About 1½ miles further down there is reached the extensive debris area known as *Besham damb*. It stretches for nearly three-quarters of a mile from east to west and on the average is about 500 yards across. Among the pottery found here the same types of decorated ware are represented as at Sraduk. Besh. 1 (Pl. II) shows a painted geometrical pattern of prehistoric type while Besh. 2, mat-marked, looks also early. Continued occupation is indicated here also by glazed fragments.

Embankments of Pardan damb.—Proceeding down by the river bed for another mile or so there was reached the locality known as *Pardan damb* from a wide torrent bed that descends close to the west of it. The remains here proved to consist of three successive stone embankments solidly constructed of large unhewn stones. They manifestly were intended to secure flood water for level areas which extend between the torrent bed and the low swelling ground eastwards. *The embankments are separated from each other by intervals of about 90, 100 and 200 yards respectively, starting from the northernmost.* It was curious to note that the true character of these embankments, obviously old 'Gabar bands', is not understood by the cultivators of Panjgur. Judging from present day conditions they find it hard to account for so much labour having been spent for the sake of so little cultivable ground. They *could scarcely be expected to realize how much greater the pressure of population* may have been in ancient times. Potsherds were scarce here and all of plain ware.

Small dambs on right bank.—The same was the case on the stone-covered plateau about one-third of a mile across and known by the name of *Chorruk damb*. It was reached two miles further down after skirting the irrigated lands of Washbod with their continuous belt of date-palm groves. Also at the small damb of the village of Gramkan which adjoins lower down the potsherds consisted almost entirely of plain coarse ware, the few fragments with painted parallel lines affording no clue as to age. Finally I visited about a mile to the west of Gramkan the mound of Khudabadan. It is crowned by the ruined walls of a fort which was said to have been built or restored by the father of present chief representative of the Naushirwani clan at Panjgur.

and subsequently destroyed by order from Kalat. Judging from the few fragments of decorated pottery, including glazed ware, to be picked up on the slopes below, the small mound is likely to have been occupied about the same period as Kohna Kalat.

Panjgur in Muhammadan times.—From the survey of such remains as could be traced in and near the Panjgur oasis it would not be safe to conclude more than that the settlements comprised in it were once somewhat larger than the present ones, anyhow during mediaeval times. It is possible to account for this without assuming any great change in the physical conditions and the economic resources dependent upon them, by the fact that Panjgur, owing to its position on a main route connecting Persia with the lower Indus, must have claimed considerable importance with regard to whatever trade passed between those two regions in early Muhammadan times. The existence of such trade appears to be well attested by the references of early Arab geographers and travellers.[4]

As they all rightly describe Makran as for the most part desert, Panjgur, being a place where caravans could revictual after many marches across barren ground, may well have then enjoyed some degree of prosperity. Thus if the proposed identification of Panjgur with a stage on that trade route which the Muhammadan authors mention under varying forms of the name as Kanazbun, Kanarpur, etc., is to be accepted, we could reconcile their references to its wealth with what the examination of the oasis and its scanty surviving remains has shown us. But it ought to be noted that the proposed location appears still to await critical re-examination on the basis of the original texts.

SECTION ii.—THE BASIN OF PAROM

On December 28th I left Panjgur for the Persian border. I was anxious to visit the mounds in the Parom basin adjoining it of which I had received a report. A newly made motor track connects the Makran Levy Corps posts which guard this far-off stretch of the North-west Frontier and offered facilities for reaching Parom by a route combining geographical with quasi-antiquarian interest.

Visit to Grawak.—A drive of some 56 miles along the barren gravel glacis of the Siahan range and well above the course of the Rakhshan river took me on the first day to the small fort of Grawak. It is situated at the point where the Rakhshan river joins the Mashkel, close to the projecting *angle of* Persian territory comprising the tract of Kuhak. Held by a *detachment of* the Makran Levy Corps, it guards the entrance of the narrow defile in which the united river makes its way into the *Kharan basin*. Next morning descending in the defile for about two miles I *visited the* delightfully green spot where springs issuing in a ravine amidst *gloomy* conglomerate cliffs permit the few Baloch families of Grawak to maintain cultivation on terraced fields in

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[4] I take the references [illegible] H. [illegible] *History of India*, Note B, Appendix, where these Arab notices are [illegible] from Ru[illegible]—Bull [illegible] Vol. [illegible] p. 4[illegible]. [illegible] conjectured identification of Panjgur with [illegible] *Geographical Journal* [illegible] pp. 397 sq., 670.

a nook of these arid hills Above this there rises steeply a small rocky ridge, precipitous cliffs render it practically inaccessible on all sides except from a narrow ravine on the south Potsherds lying on the crest showed that this ridge had served perhaps more than once as a natural place of refuge, but as they were all of plain coarse ware they furnished no indication as to the time of such occupation It was no surprise to find the main spring duly honoured as a place of local worship, marked by the supposed resting place of a saint, Pīr Umar Jan

Gar post on prehistoric mound—The same day a drive of some 35 miles along a difficult track passing through utterly bare broken hills and desolate valleys brought us to the Levy post of Gar It is situated to the south of the Rakhshan river, practically dry where we crossed it, and in the wide trough of a valley which descends from beyond the border The small post had been established only for a few years to keep off cattle raiding parties from the Persian side, and within the little entrenchment nothing better than reed huts and dug outs had been provided for the shelter of the two dozen odd Brahui levies Some distance outside in a little group stood the palm mat huts forming the homes of the men s families these are liable to be shifted periodically with the detachment along the line of posts It seemed an apt illustration of what a newly started Roman outpost held by local auxiliaries might have looked like on a Syrian or African *Limes* line

But I soon realised that there was a more direct archæological interest attaching to this lonely post of a modern British *Limes* For fragments of painted pottery found amidst the refuse on the slopes of the little mound on which the post has been placed proved that the spot had been occupied already in prehistoric times The potsherds picked up at Gar are almost all of a fine red ware, and among the patterns painted in black is found the hook design (Gar 1, Pl III) already familiar from the prehistoric mounds of Besēma and elsewhere The advantage of a height commanding the flat alluvial plain around obviously accounted for the latest occupation of the mound, and similar reasons, no doubt, caused it to be tenanted in the distant past

Pipili-Kalāt—Our journey on December 30th lay first over a wide sandy plain stretching to the south east near one of the dry flood beds in which the Gwargo river descends into the lowest portion of the Rakhshan valley One of our lorries there stuck in a shallow pool which the latest rain had caused to extend across the 'road and it cost some hours before we could extricate it Then not far off, at about 11 miles distance from the Gar post I visited a small hillock known as *Pipili Kalat* It proved to be formed by a tamarisk cone of the regular type so familiar to me from the Tarim basin, on its top, about 25 feet high it is covered by live tamarisk bushes Coarse potsherds of uncertain age were picked up on flat ground when approaching the hillock from the south Scattered rough stones on its top marked a rough walled enclosure which looked recent That some cultivation had once been carried on in the vicinity was suggested by a line of pits marking an old Karēz which was passed about a mile and a half farther on

Kap marsh of Parōm basin.—Then the track turned south towards the gaunt serrated hill chain known as Pipiski. after passing for some seven miles through the stony desolation of much eroded ridges it suddenly brought us into view of the long stretched drainageless Parom basin. Its centre holds a great salt marsh extending for over 25 miles from east to west and fully 8 miles across where widest. It is completely dry except after a season of heavy rainfall and is known by the generic Balochi term of *Kap*. With its absolutely level salt encrusted expanse sinking westwards below the horizon this Kap strangely recalled to me the dried up Lop sea bed. Fortunately its glittering surface of salt presents none of the difficulties encountered on the latter through blocks of hard salt upheaved into hummocks etc. Yet the salt crust covering the Kap is also cracked into innumerable pentagons after the typical fashion of such dried up salt marshes. Its soft surface offers ideal going for cars. So the small fort of *Diz Parom* at the foot of the wide gravel glacis descending towards the south western edge of the Kap was safely reached before nightfall even though we had followed too far the track leading to the present Levy post at the western extremity of the Kap and subsequently had to make a great detour to gain our destination.

Cultivation in Parom basin.—Diz Parom lies near the eastern end of that portion of the Parom basin where the head of the salt marsh narrows to a couple of miles. There room is left for a wide belt of scrub covered ground along the foot of the hills forming part of the Central Makran Range which enclose the basin on the south. This gently sloping ground extends for more than twenty miles westwards to the watershed marking the Persian border, on it good grazing can be found and also patches of Khushkaba cultivation. The general belief in Panjgur was that with a population less scanty and less addicted to nomadic life cultivation could be considerably extended even now for Parom is credited with a somewhat greater rainfall than the rest of the area comprised between the hills of the Central Makran Range or the valley of Rakhshan.[1] But what may be considered quite certain is that this part of the Parom basin once afforded subsistence for an agricultural population of some size for only on this assumption is it possible to account for the number of ancient mounds which I was able to trace on this ground.

Fort of Diz Parom.—The small fort of Diz Parōm until some years ago held as a post of the Makran Levy Corps raises its thick mud walls on the top of a small mound about 30 feet high. That this is composed of ancient debris is certain. But owing to the accumulation of refuse on the slopes which prolonged occupation of the fort as a place of refuge in modern times accounts for and the presence of a regular nomadic camping ground immediately at its foot no close search of the slopes for potsherds was practicable. The four fragments of painted ware which were picked up here and of which Pl. III reproduces specimens are obviously prehistoric. They belong to two

[1] Cf. Hughes Buller, *Makran Gazetteer*, pp. 313 sq. The Census tables of 1901 show for Diz Parom and Sar Parom a total population of only 315 souls.

separate flat dishes and are both decorated with geometrical patterns neatly drawn in black. The design in D.P. 1 consists below of lozenges formed by conventional leaf shapes alternating with circlets arranged to form smaller lozenges; along the rim there is a row of small ovals. Outside there is below the rim a broad border composed of a lozenge diaper. The second dish appears to have been decorated inside with a similar but slightly larger pattern. The fabric of both dishes is a very fine clay of dark terracotta colour, remarkably hard.

Prehistoric mounds near Diz-Parom.—About a mile to the north of the fort there rise two mounds close together above the scrub-covered ground. The one to the east has a diameter of about 50 yards and is about 20 feet in height. It is covered with abundant pottery of superior make, both plain and painted. The colour of the painted ware varies from dark red to buff and a yellowish grey. The patterns (see for specimens D.K. 1–9, Pl. III), all geometrical, are executed mostly in black or brown and comprise successions of stripes surmounted by small vandykes, hachured leaf shapes and a variety of scroll-work. A number of pieces show dark pink bands besides black or brown as a second colour in their design. In addition to a few fragments with incised ornament of a simple geometrical type there was found here the piece D.K. 10 (Pl. III) showing the coarsely incised outline of a fish. Some pieces with raised ribbing and the fragment of a handle found here make me inclined to attribute the occupation of this mound to late prehistoric times. On a smaller mound about 200 yards to the west painted potsherds were distinctly fewer and their patterns coarser, while pieces decorated with raised ribbing (D.K. b. 1, Pl. III) were proportionately more numerous. But here too not a single glazed fragment could be found which might prove occupation into historical times.

Early painted ware of Jai-damb.—Riding westwards for about eight miles across a scrub-covered clayey plain which clumps of trees and scattered Khushkaba fields varied in places, we arrived at the small mound known as *Jai-damb*. Its height is only about 12 feet and its top occupied by a roughly built enclosure of sun-dried bricks measuring inside 20 by 26 yards. The enclosing walls as well as a small ruined tower at the north-west corner are comparatively modern, though the aged 'kauhda' (Katkhuda) or headman of the Baloch camping about Sar-Parom declared that they were already in ruins when his grandfather came to use the little circumvallation for a time as a place of safety. But closer inspection soon showed that the mound itself goes back to a very early period. The plentiful painted pottery found on the slopes and around the mound provided a welcome surprise. The geometrical patterns boldly executed in black or purple over a ground which varies from red to buff and brown display an unmistakable affinity to those of the painted pottery with which the chalcolithic sites of Northern Balūchistān and Sīstān have made us familiar. As seen in the specimens J.D. 1–12, 19 (Pl. III) we meet here with hachured leaf shapes, pairs of triangles meeting at the apex, concentric squares, feathered bands, all motifs which have their parallels at those early prehistoric sites.

Painted grey pottery of early type—But still more interesting is the abundance at Jai damb of fragments of a fine grey ware either painted or plain They forcibly recalled to me the closely similar but far rarer pieces of such ware I had found at Periano ghundai and at some of the prehistoric Sistan sites[2] There the few painted pieces of this kind all belonged to flat dishes or open bowls and showed their designs along the rim on the inside The fact that this is the case also with many of the Jai damb fragments of this type (see J D 13 15 17 18 Pl III for specimens) makes the connexion particularly striking Characteristic of the Jai damb painted grey ware is also greater freedom in the scroll designs when applied on the inside Other patterns on such ware as seen in J D 14 16 20 (Pl III) fall more closely into line with the geometrical designs of the red or buff painted pottery from this mound

Occupation of Jai damb—Fragments of this grey ware were particularly frequent at the western foot of the mound There a rough entrenchment made in the time of the Sar Parom headman s father had caused the soil outside the mound proper to be disturbed This seems to point to pottery of this kind belonging to the earlier debris strata of the site Neither ribbed nor glazed fragments were found which suggests that the mound was left unoccupied during historical times until it was turned into a place of refuge a century or two ago by the erection of the rough circumvallation on its top Within this enclosure there is found an undoubtedly ancient well lined with large flat slabs of sandstone which evidently had been brought from the hill range to the south The well measures 26 inches by 19 at its mouth and was measured to a depth of 40 feet It is said to have been cleared by the present headman s grandfather and to have then yielded water for a while It has been dry since for many years

Mound of Sar Parom—The Makran Levy Corps post of Sar Parom was reached some two and a half miles further to the west It had been moved to this advanced position from Diz Parom several years ago for the sake of offering better protection against cattle raiding operations from across the border Attempts at such were said to be still frequent owing to the lawless conditions prevailing in Persian Makran The name Sar Parom (head of Parom) is applied in general to this westernmost portion of the basin After what I had seen at Gor I was not surprised to find that the newly established post also occupied the top of an ancient mound This mound originally known as *Kuruzkol* could scarcely have been much higher than that of Jai damb before the entrenchment and mat-covered dug outs constructed for the Levy detachment had changed the appearance of its top Its diameter may have been about 50 or 60 yards As the mound stands on a tongue of rising ground the outlook from the post is fairly wide The painted pottery found outside the entrenched post bore very close resemblance to that of Jai damb both red and grey ware of the types there described being well represented (see S P 1 5 and S P 6 7 Pl. III for specimens of the two types respectively)

[2] See *Baluchistan Tour* pp 34 3., 4 sq Pl. V *Innermost Asia*, ii pp 957 sqq

Peculiar to this site are some pieces like S P 8 showing decoration with a series of fine incised streaks Of special interest is a small fragment from the rim of a stone cup (S P 9) evidently turned on the wheel for finds of such small vessels mostly of alabaster are frequent at chalcolithic sites from Sistan to Zhob

Wutaki-damb —From Sar Parom I visited the same day the mound known as *Wutaki-damb* and situated about 1½ miles to the north west It has a diameter of about 60 yards and a height of 10 feet or so in the centre Here fragments of glazed ware showing decorative designs, mostly black or brown over a green or white ground, were picked up in plenty on the surface Occupation down to mediæval times is thus proved But a few pieces of the previously described grey ware including a painted fragment from the rim of a bowl suggest that the formation of the mound started from a prehistoric period

Mound of Shami damb —On New Year s day a ride of about 9 miles took me with a Levy escort to the mound known as *Shami damb* It is situated in the middle of the wide peneplain furrowed in places by shallow flood beds which extends westwards of the head of the Kap right away to the watershed marking the Persian border Only at a few points did I notice traces of abandoned Khushkaba fields though the ground with its good soil and easy slope seemed well adapted for cultivation in years of adequate rain fall The mound of Shami damb rises within a pottery strewn area which measures over 200 yards in diameter to a height of about 15 feet Its top measures from 30 to 40 yards across Two pits dug at its north east foot one of which looked recent are evidently due to treasure seeking operations

Painted pottery —The plentiful painted pottery found both on the mound and around it shows considerable variety both in the colour of the material red buff brown or a yellowish cream and in the colouring of the designs These are executed directly on the ground in different shades of brown less frequently in black or purple A characteristic feature is the appearance of dark pink or red as an additional colour as in Sh D 1 6 (Pl III) The patterns as shown by the specimens in Pl III are mainly geometrical Parallel bands divided by vandykes or baluster like lines (Sh D 2 6 7) are very common So also are rather coarsely executed scrolls and volutes (Sh D 1 3 4 8) In two fragments we find animal figures introduced in Sh D 5 what seems to be intended for a horse and in Sh D 9 a badly faded piece a large bird with raised wings All the painted decoration can be paralleled from sites undoubtedly prehistoric But it deserves to be noted that the incised ornament of the raised band Sh D 10 might well be later and so also a fragment of what seems to have been a handle with mouldings Of glazed ware only a single fragment from a pot in celadon blue was found Not a single potsherd showing ribbing was seen But four pieces belonging to the rim and shoulder of a bowl, Sh D 11 worked in fine clay show decoration with burnished lines such as in Sistan occurs in pottery from early historical sites

Return to Panjgur —My ride that day was extended across the open divide for another three miles up to the undemarcated Persian border But no other mound could be sighted either on this side or on the flat ground continuing beyond The motor lorries had rejoined us at Sar Parom by the track from Diz Parom leading up the Kap and enabled us by January 2nd to regain Panjgur where a depot of all spare baggage had been left The ground adjoining the main portion of the Kap to the north east and south consists almost throughout of low rocky knolls and eroded ridges This together with the scanty drainage from the low hills on those sides explains why no cultivation on any scale can ever have been practicable on those shores of the dried up marsh bed Nor were any traces of former settled occupation met with after leaving the Parom basin until approaching Panjgur we passed the Kohna kalat site already described

CHAPTER IV.—IN THE KĒJ VALLEY AND DASHT

SECTION i —FIRST STAY AT TURBAT

Across the Central Makran Range —After my return to Panjgur on January 2nd camel transport was arranged overnight to carry such *impedimenta* including excavation implements for a hundred labourers as could not be taken by the lorries over the difficult route ahead to Turbat Next morning we started for this the chief place and administrative centre of Makran That day's drive of 90 miles carried us right across the Central Makran Range to Hoshab in the Kej valley That it took our Dodge lorries fully ten hours to accomplish it safely may serve to indicate the difficulties of the track All the way we met only a single human being in the person of a camel rider employed on the postal service from Turbat to Panjgur This sufficiently shows how little this wide belt of deeply eroded hill chains and winding narrow gorges has to offer even for nomadic existence Before crossing by the Katag pass the last chain of hills overlooking the Kej valley we traversed another wide Kap, that of the drainageless basin of Balgattar for fully 13 miles Fortunately the bare level plain was quite dry at the time such rain as came down six days later made it then impassable for weeks both to cars and camels No remains of antiquity could be looked for on such ground

Journey along Kej river —On January 4th we completed the journey to Turbat by a drive of 60 miles along the Kej valley After crossing the Kej river bed some ten miles below Hoshab the track keeps on the glacis high above the left bank and thus far away from Sami Hirok and Shahrag the only two permanent villages which the Kej valley holds above Turbat Wide and open as the ground is on the left bank sloping up gently towards the range to the south yet it could never have seen any cultivation for the torrents descending from the hills have all cut their courses far too deep into the stony glacis to afford any chance for inundation canals or Karezes

Stay at Turbat.—At Turbat I was kept busy for six days by collecting whatever local information could be secured about old remains in the main tracts of Makran, by rapid surveys of those which were within reach of the Turbat oasis, and by careful arrangements for the long tour which was to take me further south to the Dasht tract and the Arabian Sea coast. In all these tasks as well as in my subsequent explorations within Makran I received most willing and effective help from Muhammad Yaqub Khan, the Naib Wazir of Makran, and Mustafi Muhammad Hassan, his Deputy. Much useful local information was made available to me also by Sirdar Bai Khan, the local head of the Gichki family once ruling Turbat and the neighbouring tract and still holding most of the land, as well as by Muhammad Khan, his active young nephew employed under the Assistant Political Agent. A fortunate chance had just at this time brought also Lieutenant L. W. Wooldridge, Adjutant of the Makran Levy Corps, to the vicinity of Turbat. The arrangements for needful escorts and other help from the Corps greatly benefited by the presence on the spot of this energetic young officer.

Importance of Turbat oasis.—A narrow strip of fertile irrigated land, comprising a practically unbroken string of villages, mostly small, stretches on both banks of the Kej river for a total distance of about seven miles both above and below the fort and headquarters of Turbat. This oasis appears to have since early times formed an important, if not the chief, centre of population in Makran. Hence we find the name *Kej*, which applies in particular to it and the neighbouring smaller oases, included in the mediaeval designation *Kej Makran* used for the whole country.[1] The oasis, now usually known as *Turbat* after its chief village, owes this importance not merely to its economic resources being greater than those of any other tract in Makran, but perhaps equally also to its convenient central position on the great natural highway which the Kej valley provides through the country.

Conditions of occupation.—The local conditions affecting the survival of ancient remains on this ground closely correspond to those which I have endeavoured briefly to indicate above in the case of Panjgur. In the Turbat oasis too cultivation is carried on exclusively with the help of permanent irrigation which the numerous Karezes and canals (*Jaur jo*) from the river assure. Hence here also the cultivators' homesteads, nowadays mostly palm-mat huts, are much scattered. Each is placed as close as possible to the owner's or tenant's own intensively cultivated small patch of land with its date palms which provide the principal crop. There is no reason to suppose that these conditions of occupation were essentially different during earlier periods. If in addition we take due account of the amount of alluvium annually deposited by canal irrigation from the river, it becomes easy to understand why the number of localities where ancient remains can be traced above the ground is so limited.

Preliminary examination of sites.—During my first stay at Turbat I visited every place within or near the oasis where 'dambs' or other remains

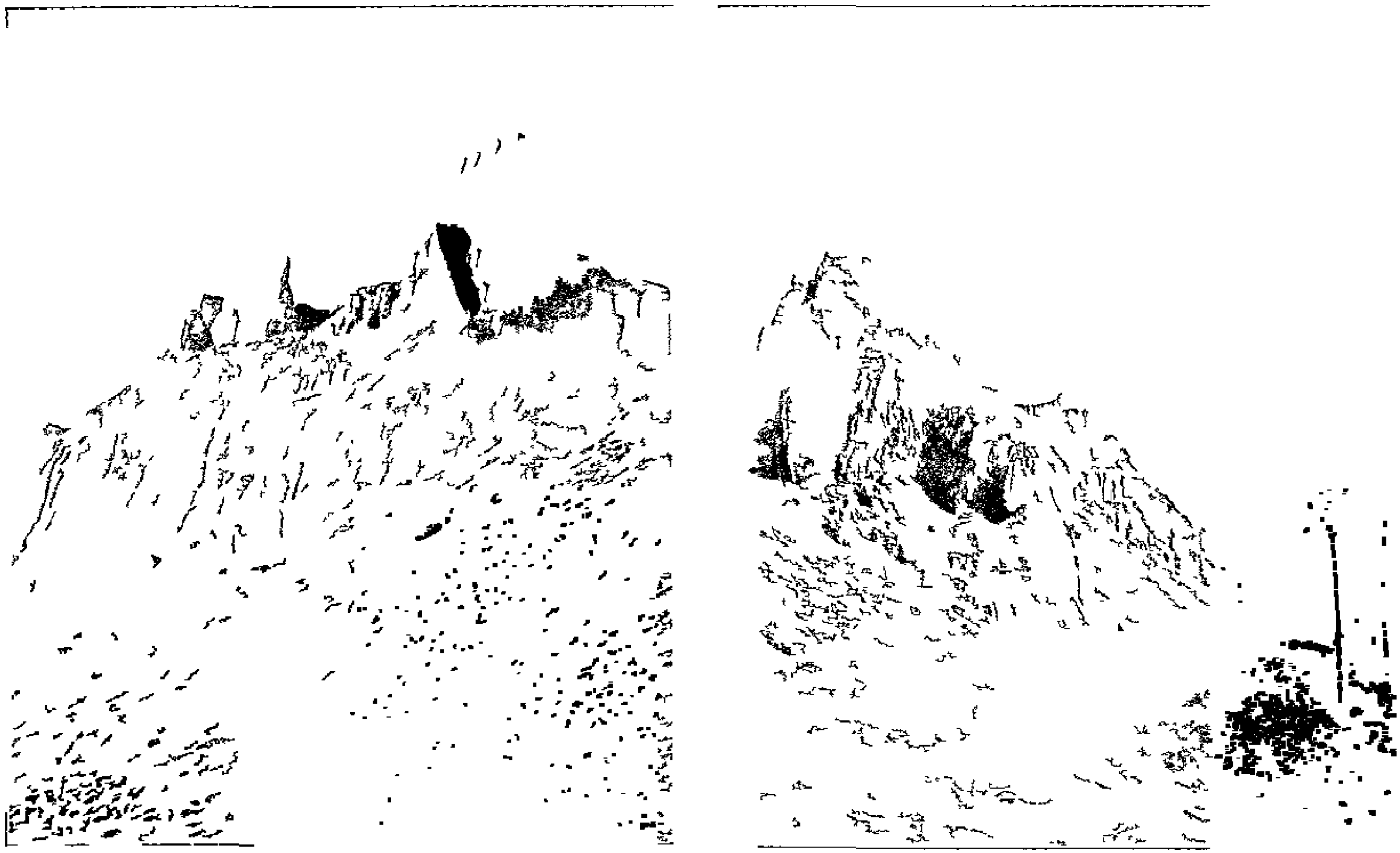
1 See above p. 9.
2 See above pp. 40 sq.

were reported At two points my preliminary survey enabled me to recognize sites which deserved to be investigated by means of at least partial excavation Various considerations induced me to postpone this task until my return from the coast a month later It will hence be convenient to leave the description of the results which attended our subsequent labours at the mound of *Shahi tump* and at the early burial ground of *Zanqian* to a later chapter Here it will suffice to note that at both places excavation has confirmed the diagnosis I arrived at after a rapid examination of the remains traceable on the surface

Castle of Miri —Among the remaining sites that of the ruined castle known by the generic designation of *Miri* ('the ruler's place'), was certainly the most interesting It was visited by me twice, on January 5th and 8th, and only the pressure of other urgent tasks prevented my devoting to it the time which a detailed survey of this great ruined stronghold would have claimed It rises about half a mile from the right bank of the river at a direct distance of close on five miles to the north west of the village and fort of Turbat The ground around had long remained untilled in modern times, but a newly constructed Karēz has once more brought to it water for irrigation, and fields now reach to the very foot of the Miri

Outer circumvallation —It is an imposing pile, as shown by the photographs reproduced in Figs 9 10 It has been built up by the efforts of successive rulers of Makran to an elevation of about 120 feet at its highest point The castle appears to have been occupied until late in the last century the inner fort being held by the Khan of Kalat's officials and garrison while some structures less ruinous than the rest in the eastern portion of an outer enclosure, were allotted to the Gichki Sirdars These continued to share in the revenue from the Kej valley even after their submission to Brahui rule This outer circumvallation adjoins the inner fort on all sides except on the south and shows a length of about 300 yards between the massive corner bastions which flank its northern face Its western face measures only a little over 100 yards while on the east the width of the enclosed area is somewhat increased That the whole circumvallation is raised on an ancient debris mound can best be seen along the northern face There the foot of the ruined clay walls rests on a level about 30 feet above that of the surrounding fields The same is approximately also the level on which most of the structures within showing varied stages of decay appear to have been built.

Substructure of inner fort —The natural slope of the ancient debris mound which underlies the greatest portion if not the whole of the outer walled in area strikingly contrasts with the steepness of the massive substructure on which the long but narrow inner fort is built This substructure as seen in Fig 10 showing the south face appears up to a height of about 50 feet to consist of solid stamped clay or mud brick masonry Where it has suffered by erosion its breaches have been repaired with rough stone work In the walls higher up courses of large waterworn stones set aslant intervene with sun dried brick work The latter method of construction has alone been used for the towers and walls of the inner fort The former is still frequently found in modern structures of Makran and Kalat defensive



or other. The gates of both the outer circumvallation and the inner fort lie towards the south-east. Within the gate of the inner fort a long and deep cutting of which the origin or purpose is not clear has laid bare layers of clay or rubble to a depth of some 15 feet. In this cutting was found a potsherd with 'ribbing.'

Fragments of prehistoric pottery.—But far more significant for the early occupation of the site is the number of small fragments of pottery of undoubtedly prehistoric type, both plain and painted, which could be picked up even in the course of a rapid search not only outside and within the lower circumvallation but also on the ground within the inner fort. They comprise little pieces of fine red ware with simple geometrical patterns in black just like the pottery found at prehistoric sites from Toji-damb to Pirom, and also specimens of the same grey ware with designs executed in black or purple as found so plentifully at the mounds of Jai-damb and Shahi-damb and described in the preceding section.[3] The discovery of fragments of such early painted pottery high up on the slopes and top of the inner fort is accounted for by their having got embedded in the sun-dried bricks and clay brought up from the very foot of the mound on which the whole Miri is built. Evidence for this explanation was supplied by little pieces of such ware which we could pick out from the sun-dried brick masonry of walls still standing on the top of the inner fort. It is very probable that these bricks were made just outside the outer circumvallation. This obviously was the nearest and most convenient place to secure both material and water for brick-making, especially if tradition is right in asserting that a fosse once surrounded the castle. I could not find definite proof of this fosse beyond a broad depression which runs along the foot of the northern face of the outer circumvallation and connects with the line of an abandoned Karez near its north-east corner.

Evidence of later occupation.—Apart from the pottery just referred to striking evidence of prehistoric occupation of the site is furnished by two fragments of neatly worked stone cups, one of them alabaster, which were found within the outer enclosure. The use of such lathe-turned cups and bowls is abundantly attested at neolithic and chalcolithic sites of Sīstān and Balūchistan.[4] To the same early stratum belongs perhaps also the fragment of a black glass bangle. In addition to such early relics pieces of glazed pottery of all kinds ranging from apparently early mediaeval Persian ware to Chinese porcelain, could be collected in still greater numbers from the precincts of the Miri. There is every reason to believe that as erosion in the course of centuries proceeds at the ruined castle it will become still easier for future archaeological visitors to trace on the surface vestiges of the long history of the site. But the very extent of it and the heavy accumulation of late structural remains overlying the prehistoric strata precluded my sparing time here for trial excavations. This seemed to cause some mild surprise to my local Gichki friends and to others; for they were fully convinced that my visits to 'dambs' etc. could only be prompted by treasure-

[3] See Pl. IX for specimens of red pottery, T. M. 1, 2; for grey painted ware, T. M. 3, 4; for glazed pottery (blue on white), T. M. 5, 6; for blue on white stoneware (Chinese ?), T. M. 8; for a piece of fine red pottery showing incised hachuring, T. M. 7.

[4] Cf. *Innermost Asia*, i, pp. 951, 954 etc.; *Baluchistan Tour*, pp. 3, 38, 40; below pp. 63, 65 etc.

seeking arms They hence expected that the hidden hoardings of their ancestors would here be bound to offer me the very strongest attraction

Smaller sites near Turbat —About two miles west of the Political Bungalow of Turbat I was shown a fairly large damb' on the gravel slope just south of the village of Gushtang The mound rises to about 20 feet in the middle and measures about 110 yards in diameter The few painted potsherds which could be found on it amidst coarse plain ware showed poorly executed designs which looked of late prehistoric type such as found subsequently at the head of the Mashkai valley and previously on mounds about Pishin

Some 'dambs were reported to me in the vicinity of Kalatuk a village situated near the right bank of the river about 11 miles from Turbat They proved to be a group of about eleven small stone heaps roughly circular in shape stretching in an irregular line along a shallow drainage bed which descends over the stony glacis about a mile east of Kalatuk They are from 3 to 4 feet in height and measure between 10 and 15 feet in diameter Those which could be opened with the few men at hand contained within only loose stones large and small But there can be little doubt that they were meant for burial cairns like the numerous less roughly constructed tumuli which I subsequently was able to explore with more interesting results at Jiwanri on the coast and at Zangian the previously mentioned site to the south of Turbat[5] This conclusion was fully confirmed by the finds made within exactly corresponding little tumuli which I was able on my return from the coast a month later to clear on the same stony glacis some 12 miles further west near Nasirabad[6] Here I may conveniently mention that *similar groups of tumuli* were reported to exist near Bit in the valley of Buleda to the north of Turbat which want of time did not allow me to visit on my return as originally intended

SECTION ii —ALONG THE DASHT VALLEY

By January 10th the camels bringing our heavy baggage from Panjgūr safely arrived and on the following morning we could set out with all needful equipment for the tour which was to take me down the Dasht valley and to the westernmost sea coast of British Makran Its principal object was to acquaint me with certain ancient sites in that area which Major L Mockler, for years stationed as Political Assistant at Gwadar had visited and briefly described[1] The first of these sites to be surveyed was that of Suktagen dor near Suntsar There the Dasht river formed by the *union of the* Kej and Nihing *passes the last offshoot of the Makran* Coastal Range before entering the head of its delta

Route to Dasht valley —In order to reach this site the caravan track had to be followed which leads lower down along the *left bank* of the Dasht river and connects Turbat with the small ports of Gwadar and Jiwanri It is practicable only for

[5] *Cf* below pp. 77 sqq 86 sqq
[6] See below p 8.
[7] For a reference to these tumuli *cf* Hughes-Buller *Makran Gazetteer* p 303
See his note On Ruins in Makran *J R A S* 187 pp 121 134

laden animals but for the first march which lies through low and much broken hills to the south of the Kej valley a newly constructed motor track was available So in order to save time and to use it for correspondence by the mail which leaves Makran only every second week by the sea route I sent our transport and mounted Levy escort ahead intending to catch them up by motor at the first camp The arrangement reasonable enough except for its disregard of a change due to Makran s peculiar climatic conditions brought a somewhat trying experience in its train This had a certain quasi antiquarian interest and may therefore fitly find here mention

Overtaken by spate —Rain rare as it is in Makran is apt to come on suddenly and then very heavily for a short time But when it started that day several hours after the camels with the baggage had moved off it was but an intermittent slight drizzle This sufficed to make the track leading over clay and detritus rather heavy going for our motor lorries but there was no choice but to overtake the convoy We had covered some six miles only and entered a wide floodbed coming from the low hills to the south and still practically dry but for the wetted surface when one of the lorries stuck in a small drainage channel holding only a trickle of water While efforts strenuous but vain were made to lift the stuck hind wheel out of the little pool gathering around it the drizzle started afresh Before it had time to turn into proper rain water was rapidly spreading around us and soon across the wide detritus fan too I realized in time the threatening spate and had what little baggage was with us carried first to the bank of the floodbed and when that too became submerged to a small ridge of crumbling rock very steep and narrow which fortunately rose close by above the soft detritus

Thoroughly drenched already before we had to seek refuge by crouching on this awkward rocky perch for over two hours in the rain Then the flood all around began to subside even more rapidly than it had risen It had topped the body of the lorries and covered the engines with silt As the deep cut floodbed of the Sorab behind us remained unpassable the help early summoned from Turbat could not reach us until late next morning Fortunately the sky became perfectly clear by the evening and what with the blazing tamarisk scrub which we managed to set on fire and the help of what bedding was with us in the lorries the cold night under the star lit sky was passed without too much discomfort for any one of the party —though it meant also a fast till next evening By 11 A M the lorries were dragged out of the boggy bed with the help of a large posse of men who by then had arrived from Turbat and who were to manhandle them back there With the baggage loaded on two camels we set out on foot for the camp ahead and before dusk gained its shelter at a water hole above the mouth of the Kini valley

Incident on Alexander s march —The experience here gained may well serve to illustrate a far more serious incident which Arrian relates in connexion with Alexander s march through the country of the Gadrosians

[a] Cf Arrian *Anabasis* VI xxv I reproduce the extract as translated by McCrindle *Invasion of India*, p 175

Another disaster also befell the army which seriously affected the men themselves as well as the horses and the beasts of burden For the country of the Gadrosians like that of the Indians is supplied with rains by the Etesian winds but these rains do not fall on the Gadrosian plains but on the mountains to which the clouds are carried by the wind where they dissolve in rain without passing over the crests of the mountains When the army on one occasion lay encamped for the night near a small winter torrent for the sake of its water the torrent which passes that way about the second watch of the night became swollen by rains which had fallen unperceived by the army and came rushing down with so great a deluge that it destroyed most of the women and children of the camp followers and swept away all the royal baggage and whatever beasts of burden were still left The soldiers themselves after a hard struggle barely escaped with their lives and a portion only of their weapons Spates of this kind and volume are known to descend into the valleys of Makran even while the sky above keeps clear This fully confirms the correctness of the record preserved by Arrian

Remains of Haft brat—A march of some 28 miles lengthened by detours which the flooded condition of the alluvial plain necessitated in places carried us on January 13th down the main eastern portion of the Dasht valley Where the barren side valley of Kani is joined by another before debouching into the plain the track passes curious remains known as *Haft brat* the Seven Brothers There below a rocky ridge there stretch in a row thirteen walled enclosures adjoining like rooms The average size of each is about 25 feet square diminishing slightly towards the eastern foot of the ridge The lines of large unhewn stones looking as if meant for wall foundations can clearly be traced but no remains of walls rise above them No potsherds or other helpful indications could be found near these strange enclosures and their purpose remains obscure [3]

Cultivation in Dasht—On the bare alluvial flat which stretches with a width up to 7 8 miles away to the right bank of the river patches of cultivation dependent on rainfall are met but no permanent settlements What flood water descends to the plain from the hill range to the south is caught by low earth embankments around these Khushkaba patches It is certain that with a less scanty and more settled population these scattered dry crop areas could be considerably increased here But from my intelligent and helpful local guides the Naib and headman of the Dasht tract I did not learn of remains due to continued *occupation* in earlier times at any place but the village of *Kuddan* which was reached at the close of the day's march It is situated at the point where the foot hills of the boldly serrated Sajidi range first meet the Dasht river's course On the opposite side of the river it is faced by the little fort of Kohak the administrative centre of Dasht some four miles away So with its forty odd mat-huts Kuddan ranks high among the few more or less permanently inhabited localities of the *tract* It owes this distinction to the possession of land within the low lying belt of ground which in years of good floods is rendered very fertile by inundation from the river

[3] Cf below p 137 for similar remains

Mound near Kuddan.—It is just above a portion of this land, at about a mile's distance to the south-west of the village, that there rises a much eroded mound separating the cultivated low ground from the glacis of hard clayey soil sloping up to the foot of the hills. The mound, known as *Mad-ch-damb*, rises to about 12 feet above this glacis of *pat* and stretches for about 200 yards from east to west with an average width of 150 yards. It is on all sides deeply furrowed by eroded ravines, and these made it easy to ascertain that the pottery débris, very plentiful on the mound, is more or less homogenous throughout its layers. Most of it is plain red ware of coarse fabric, easily distinguished from the well-levigated smooth-surfaced pottery common at prehistoric sites such as Suktagen-dor to be presently described. But the examination of the decorated potsherds, also numerous, proved distinctly interesting.

Glazed and painted pottery.—It is scarcely subject to doubt that the plentiful glazed fragments with well-executed coloured designs, mostly in greens and browns over light yellow or whitish ground, as seen in the specimens of Pl. IV, Kud. 5, 7, 9, 11, belong to mediaeval times. But other glazed pieces showing a fine dark blue or deep green glaze without ornamentation may be somewhat older. Mediaeval is probably also the fragment Kud. 8 with a rather elaborate geometrical pattern stamped in relief. It is significant to find painted ware of the type illustrated by the specimens Kud. 1-4, 10, associated with the glazed pottery; for with the coarse brushwork of its patterns and the use of red and brown colours in addition to black it ranges itself closely with a type of painted ware from mounds in Loralai and Pishin which in the report on my North Baluchistan tour I found good reason to ascribe to the historical period.[1] It deserves to be noted that not a single specimen of prehistoric painted ware, whether red or grey, nor of 'ribbed' pottery could be found here.

Mound of Panodi.—Here another and undoubtedly much older site in this portion of the Dasht may find convenient mention. It was only after passing Kuddan that information was obtained by me of a 'damb' near the hamlet of *Panodi*, situated on the other side of the river, about seven miles to the north-east of Kohal. It would have been impossible to visit the place at the time as the river was impassable for camels owing to the flood caused by rain above the Kej valley. The specimens of painted potsherds which the Naib of Dasht promised to secure for me unfortunately did not reach me until my return to Turbat; for otherwise I should have endeavoured on my return journey from the coast to find time for inspecting this mound. The painted potsherds brought from there, as illustrated by the specimens Pan. 1-5 in Pl. IV, all show geometrical patterns of prehistoric type. They are executed in black or brown on fine well-levigated clay, either light buff or grey, without any slip. Pan. 4 is an interesting piece; for it shows above a grey body a band of reddish clay, either superimposed or due to some peculiarity of burning, by the side of a pattern in black painted on the grey clay. From Panodi there was brought also a potsherd with mat-marking. This agrees with the early age assignable to the site.

[1] See *N. Baluchistan Tour*, pp. 6? sqq., 6?, ? sq., 81 sq., etc.

March to Suntsar—Our march of January 14th close on 30 miles in length led for most of the way through a maze of completely decayed hillocks forming the foot of the frowning steep rock walls of the Sajidi range towards the river bed Only at one or two points above the latter does that desolation of crumbling sandstone leave room for some fields while for the most part the river passes under high eroded cliffs From the little temporary hamlet of Hur Nighwor where we halted for the night another long march brought us to Suntsar a guard and customs post of the Kalat State watching the caravan tracks passing up the Dasht from the coast That day much of the way lay between low decomposed ridges last outliers of the Sajidi range and often eroded almost to the flat level of the surrounding detritus But in several of the intervening ravines passed I noticed patches of cultivation now for the most part abandoned to scrubby jungle Beyond the rocky hill crowned by the Suntsar watch post the western extremity of the Sajidi range breaks up into a confused cluster of small serrated ridges and plateaus extending along the left bank of the Dasht river We crossed the deeply scoured bed of the Sajidi kaur which drains a considerable portion of the southern slopes of the range and here has cut its way to the river and halted near the point where two lines of the Indo European Telegraph one from the Persian Gulf the other from Panjgur and Turbat meet Next morning after winding our way for about three miles through low rocky spurs we emerged by the river at our goal the site of Suktagen dor

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SECTION iii—THE REMAINS OF SUKTAGEN DOR

The merit of having first recognized the archaeological interest of the site of *Suktagen dor* belongs to Major E Mockler Having passed it in 1875 and noticed remains of a brick wall exposed by the drainage he carried *out some* excavations at and near this spot in February of the following year and published brief notes on the result and the main features of the site[1] These are correctly described on the whole and an endeavour has been made to *indicate* the character of the structural remains exposed as well as that of the objects found But in the absence of relevant details and any illustrative materials apart from a small sketch intended to show the general aspect of the site from the east it would not be possible to conclude more from these notes *than that the* remains probably went back to chalcolithic times The want of any plan coupled with discrepancies between the recorded bearings and the configuration *of the ground* would not allow me when actually on the ground to locate the position where Major Mockler's excavations had been carried out especially as the ravages of half a century and local depredations appeared to have effaced whatever remains exposed might have afforded guidance

Major Mockler's excavation—Thus of the burnt bricks with which the walls of a small house first cleared by Major Mockler were built not a single one

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[1] See *J R A S* 187[?] pp. 12[?]-[?]
[2] Cf *ibid* p. 12[?]

could be found anywhere But when returning later from the coast and passing to the north of the site on the opposite bank of the river I found that a number of graves in a modern Muhammadan graveyard not far from the present Levy post of Suntsar were lined with hard bricks undoubtedly ancient As their measurements $16 \times 6 \times 2\frac{1}{2}$ inches closely agree with the dimensions recorded in Major Mockler s paper it is very probable that they had been carried away from the brick built structure he had excavated Others may have found their way into the foundations of some store huts and linesmen s quarters built at the Indo European Telegraph post above mentioned It is probable that the much disturbed ground of some low mounds to the east of the great walled enclosure of Sul-tagen dor marks the place where Major Mockler s excavations appear to have been carried into an ancient burial ground [3] But here too no definite evidence in support of this location could be traced

In view of these uncertainties I shall not attempt here any systematic analysis of Major Mockler s observations but only refer to them where they have found confirmation by the work I was myself able to carry out at the site This work was necessarily limited on the one hand by regard for the available time and on the other by the small number of men it was found possible to collect for excavation It was only by persistent efforts of my local helpers that in the course of my week s stay it was gradually raised in the end from 16 to 34 far from efficient diggers

Position of Suktagen dor —The site of Suktagen dor presents the appearance of a low rocky plateau rising in the middle of a bay about half a mile across which the alluvial flat adjoining the course of the Dasht river extends towards the chain of broken hills to the south This bay like the riverine belt itself is covered for the most part with scrub and tree growth (Figs 15 16) Small patches of the little plain are used for Khushkaba cultivation while elsewhere its level surface is broken by little decomposed ridges cropping out from the alluvial deposit of fine clay Closer inspection shows that the isolated plateau represents in reality a group of more or less detached small ridges which are joined up on the east and west by massive stone embankments and thus made to enclose in the middle a little plateau raised above the level of the surrounding plain The reddish surface of this plateau due to abundant pottery debris has given the site its name (the burned bed) Reference to the sketch plan Pl 4 and Figs 11 14 will help to illustrate the configuration of the ground

Configuration of ground —The area of ancient occupation thus comprises in its centre two much decayed ridges of soft grey sandstone striking approximately from east to west and both rising at their highest points to 60 feet above the flat ground around Two almost straight lines of thick wall and debris running north to south one over 100 yards the other 130 yards long connect these ridges at their ends Together with the steep rock slopes of the ridges they form an irregular quadrangle capable of effective defence The south western portion of the enclosed area shows an almost level surface (Fig 13) obviously due

[3] Cf 6 d ; 12, q

to silt deposit from the slopes of the ridges around All the drainage passes at the south west corner where the very massive foundations of what may have been two towers 8 feet apart clearly mark a gate Below this a drainage bed (Fig 17) encumbered with large stones probably from completely decayed structures on either side runs down to the plain in the south It is flanked by two small spurs which descend from the southern side of the enclosed area The one to the east forms several small terraces along its top and wall foundations traceable on these as well as right down to the Nullah show that this spur was once closely occupied by structures Also on the inner slope of the western outlier remains of walls crop out of the debris It deserves to be noted that the eastern spur is protected by the steep rock wall with which it falls off on the outside towards the plain

Remains N and E of enclosure—The slope descending outside from the northern ridge also offers terrace like ground, and on this structural remains could be traced apart from plentiful pottery On the other hand the western outlier of that ridge appears to have remained wholly unoccupied nor could I find any traces of ancient occupation outside the western wall of the enclosed quadrangle From the north eastern corner of the quadrangle a massive wall runs along the slope of the north ridge for about 50 yards to a point where the ridge rises steeper and from this wall there descends a less thick one due north as if meant to afford some flanking defence to the outer slopes of the north ridge Outside the eastern face of the enclosed area there extends at some distance from the foot of the massive embankment or wall a strip of ground 60 or 70 yards wide, covered with hummocks of debris marking ancient occupation Whatever structural remains may have stood here they all appeared to have been greatly disturbed by previous diggings Erosion too had added much to the havoc The foundations of rough stone walls apparently of small structures however, still showed in places

Enclosing stone walls—The most striking feature of the ruined site is the great stone wall over 110 yards long already referred to which forms the eastern side of the quadrangle (Fig 16) Its outer face is in most parts encumbered with debris But a little clearing sufficed to expose in places the fairly regular courses of large stone slabs carefully set with but little clay between the courses That the slabs were roughly squared in most cases was ascertained when digging down from the top on the inside Here the wall was built up vertical while its outside face seemed to slant at the steep angle of about 40 degrees At its base the wall appears to have a thickness of fully 30 feet, while its height as far as preserved varies from 20 to 25 feet The northern continuation of this wall shows the same massive construction The wall closing the quadrangle on the west has suffered far more decay, and owing to the heavy accumulations of alluvial dust the position of its foot outside could not be exactly determined But it seemed probable that the dimensions and methods of construction were about the same as of the east wall

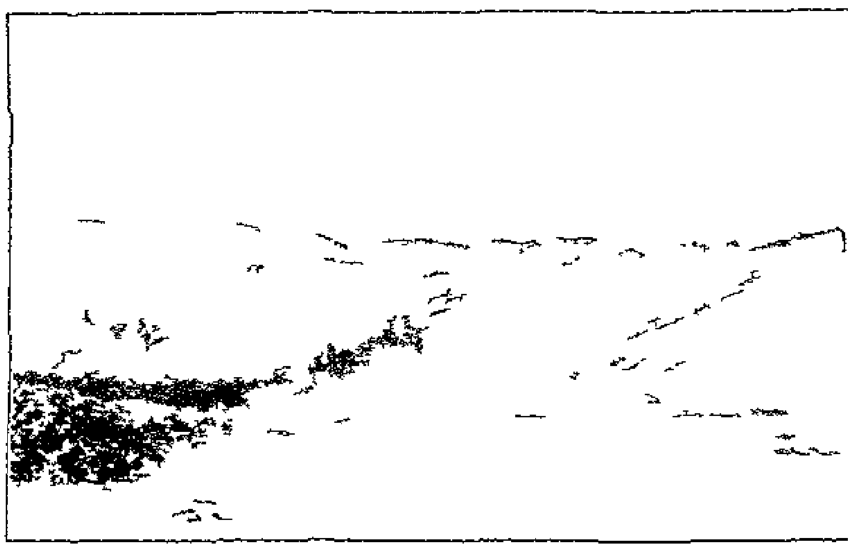
Modern defences—There can scarcely be any doubt about these walls having been built for the purpose of rendering the area between the northern and southern



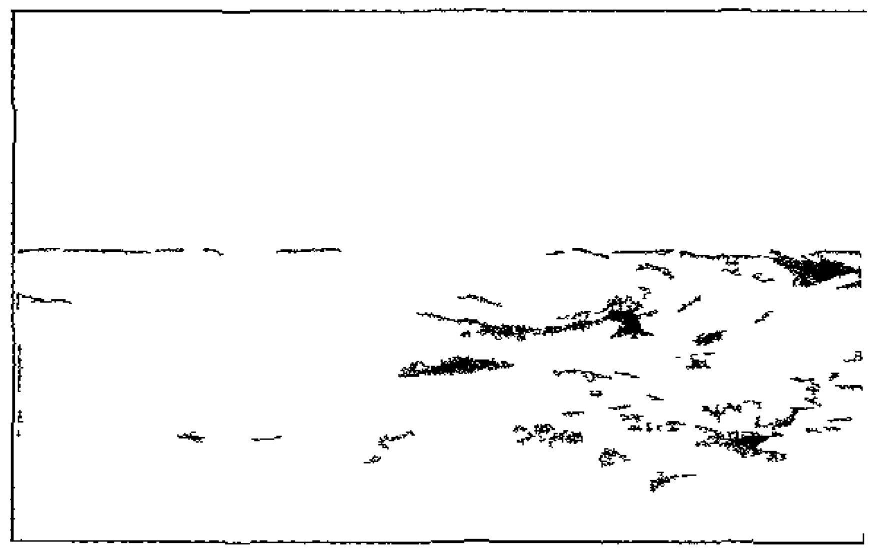
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ridges safe for occupation and capable of defence Direct evidence of their having served this purpose in a recent period is afforded by the thin walls of manifestly modern date built with small stones and in the roughest fashion, which crown both the northern and southern ridges (see for the latter Fig 14) In addition towers of the usual *sangar* type now in ruins have been raised on the highest points at the four ends of the ridges[4] The evident object was to supplement the defences provided by the ancient wall lines and the natural steepness of the ridges This modern fortification makes it all the more noteworthy that no trace of ancient walls can be found either on the northern or on the southern ridge This negative fact obviously calls for an explanation The only one necessarily quite conjectural which has occurred to me lies in the great change which since prehistoric times has come over the means for attack Defenders of the fortified area of Suktagen dōr in the last few centuries would have need to protect themselves against firearms by walls and towers however rough In ancient times the height of these ridges and the great abruptness of their outer slopes may have been thought to afford adequate security from attack

Miscellaneous surface finds —Before I proceed to describe the results of such trial excavations as I was able to carry out during my stay (January 10 21) at Suktagēn dor it will be convenient to give an account of the various classes of the miscellaneous objects which erosion has exposed on the surface and which could be collected in quantities A review of them, even if summary will help to bring out the remarkable uniformity in the character of these relics pointing to a single if prolonged period of occupation It will also help to demonstrate the close relation of the civilization revealed by them with that of chalcolithic sites in far off parts of northern Baluchistan for which I have been led in the course of my preceding explorations to assume a particularly early age

Objects in stone shell etc —With regard to the last point the great abundance of small stone implements found over all parts of the site deserves, perhaps, to be mentioned in the first place Of stone ' blades or scrapers not less than 127 were picked up on the surface almost all showing marks of prolonged use Most of them are of small sizes but there are specimens too ranging up to 4½ inches (Su 1 4 Pl VI) It is significant that not a single piece definitely recognizable as a chipped core was found This clearly points to these small implements not having been worked on the spot Of arrowheads Su 5 leaf shaped and perfectly worked in flint is a fine specimen Fragments of stone vessels, also turned up including a portion of an elegantly shaped alabaster bowl Su 23 Pl VII Fragments of bangles cut from shells are very numerous (Su 6 9 Pl VI) as might be expected considering the close vicinity of the sea coast Fragments of shells with simple incised ornament occur also (Su 10 Pl VI) Among beads in stone a finely worked elongated bead of Onyx (Su 12 Pl VI) may be mentioned The fragment of an elaborately decorated glass bangle, Su 12a (Pl VI) is interesting it is composed of three layers (cobald blue brown and

[4] These ruined towers occupy the points marked in the sketch plan Pl 4 with the height figures 60 40 60 and 47

yellow) fused and has its keel decorated with a *row of small raised light blue* spots Closely corresponding glass bangles were found by me on prehistoric mounds in the Sistan desert[5]

Plain pottery on surface—Of ceramic products it is important to note first of all the extreme abundance of plain well levigated ware of light terracotta or reddish colour fragments of this strew the whole site The thinness of the prevailing fabric seems characteristic of the local potter s craft Often a fine slip of dark red colour *is applied in bands* (Su 20 Pl VI) *or over one face* of the pottery The diminutive base found in some fragments of small bowls (Su 21 Pl VI) is a feature which has its exact counterpart among the bowls and jars of Periano gh indai[6] The same holds good of the almost straight-shaped jar Su 22 (Pl VII) A curious little pottery object Su 35 might be a toy cup

Rare painted potsherds—By the side of the abundance of superior plain ware the comparative rarity of painted potsherds is striking The pieces Su 14 19 (Pl IV) illustrate practically all the simple geometrical motifs (parallel bands hachures leaf shapes and meanders) to be found The designs are always executed in black and in the great majority of the fragments including Su 14 19 on a fine dark red slip By itself stands the fragment Su 13 (Pl IV) which shows what *may be taken for two symbols or characters unfortunately incomplete* painted on a plain potsherd after burning Of dark grey pottery so plentifully in Parom less than a dozen pieces could be found All belong to little bowls or flat dishes only one small fragment showing remains of a pattern painted in black

Perforated pottery—*Of handles* only a single ring shaped specimen (Su 24 Pl VI) of rather primitive form was found on the surface but excavation in Su i yielded two more attached to flat bowls Of pottery incised *with thin hachures* like Su 25 (Pl VII) several pieces were found Su 26 *(Pl VII)* is of interest as it shows neatly executed decoration in relief with narrow parallel ridges quite *distinct from the later ribbing* Very puzzling for a *time* were pieces such as Su 27 8 (Pl VII) perforated all over with rows of small holes Similar fragments all apparently from jars large and small were *subsequently* found at several pre historic sites of Kej and Mashkai The discovery of a complete large jar of this kind filled with charcoal at an Awaran mound[8] makes it appear highly probable that these vessels served for heating or warming *food*

Clay bangles copper fragments—Fragments of red clay bangles (for speci mens see Su 29 30 Pl VI) were very numerous just as at the chalcolithic sites of North Baluchistan and of all sizes The *half* dozen fragments of grey clay bangles (Su 32 3 Pl VI) were all much thicker Of miscellaneous *surface finds* there still remain to be mentioned many small fragments of copper most of them indeterminate But there is among them *also* a heavy barbed object (Su 34

[5] Cf. *Innermost Asia* ii, pp 963 967

[6] Cf. *e g* the small bowls and jars in *N Baluchistan Tour* Pl VII

[7] Cf *ibid* Pl. VII P S W d. 2 Pl XXI P A ?

[8] See below p 1 0

Pl VI) which perhaps may either be an arrowhead or a hook for catching large fish It seems to have been worked in thin layers subsequently joined but the manner of attachment is not clear There are also recognizable a small copper bead and fragments of needles

Finds in trenches i a c—The trial excavations were started on January 16th on a debris covered outlier of the north ridge which descends near the north eastern corner of the ancient enclosure and within it Three trenches marked i a b c on the sketch plan were cut here and in i a b carried down to the live rock struck at a depth from 8 to 9 feet The cuttings passed everywhere through layers of earth and rubble deposits which in this position could be accounted for only as due to the decay of structures built with clay and rough stones on the rocky slope The finds made here included half a dozen of stone blades or scrapers numerous fragments of clay and shell bangles the base of a small alabaster cup (Su i 1 Pl VI) and among plentiful plain potsherds of the type described fragments of a shallow bowl with handle (Su i 2 Pl VII) a small bowl with diminutive foot (Su i 3 Pl VII) and what seems to have been an elaborately moulded stand for a beaker or similar large vessel (Su i 4 Pl V) Su i 5 (Pl VII) is a specimen of covers for a small bowl or dish of which several were excavated here and elsewhere Su i 6 (Pl V) illustrates a type of broad edged flat dishes fragments from different large sized specimens were found There is evidence that in some cases such dishes were raised on high stands or bases Su i 7 (Pl V) is a piece from a large deep tray

Excavation on slope of N ridge—Our next experimental clearing was made on a debris covered little plateau on the outer slope of the northern ridge near where the outline of a quadrangular enclosure could be traced on the surface (see ii in the sketch plan) The walls of rough stone work brought to light on three sides of a space measuring about 40 by 25 feet stood to a height of 2 to 3 feet only and may have belonged to foundations Among the broken pottery found here two small jars (Su ii 1 2 Pl VII) showing shapes familiar from the chalcolithic mounds of Zhob About 20 yards to the east of this structure a small square marked by slabs 2 feet 4 inches apart and exposed on the surface attracted attention Under about a foot of earth there was found a large pot about 2 feet in diameter covered at its mouth by rough stones Within there were found ashes numerous small fragments of bones which seemed to be human, two broken small jars of the type just referred to together with fragments of thick plain pottery That the pot contained a cinerary deposit after the fashion of those found at the Zhob and Loralai sites appears very probable But this could not be so definitely proved as in the case of the pots unearthed at Su v and to be presently mentioned

Descending the small Nullah which divides the main northern ridge from the outlier bearing the debris layers of ii there were noticed traces of a wall running across the mouth of the Nullah On clearing it was found to be 8 feet thick and to be built with carefully set large slabs extending from the massive masonry wall near the north eastern corner of the enclosed area to the rocky foot of the outlier From its massive construction this wall may be assumed to have

formed part of an outer enclosure But as no continuation of it could be traced on the slope or top of the outlier this explanation remains doubtful

Cinerary deposits cleared—On the outer slope of the eastern wall and about 15 feet below the point where this wall adjoins the steep rocky slope of the hillock marking the south eastern corner of the enclosed area, erosion had exposed the mouths of three large pots in the position marked v in the sketch plan The photograph reproduced in Fig 18 shows them after clearing They had evidently been deposited in the debris accumulated at the foot of the wall That they contained cinerary deposits was made probable from the first by their upright position one above the other, as seen in the photograph, and by the fact that they had been intact when placed there The uppermost deposit proved to consist of two pots, one stuck in the other The outer one had become badly crushed and could not be measured the inner one showed a maximum diameter of 23 inches, the height as far as preserved being 15 inches Within were found numerous small fragments of human bones, unmistakably calcined, a small disc made from a shell and ornamented on its under surface (Su v *a* 1, Pl VI), a piece from a shell bangle, Su v *a* 2 (Pl VI) fragments of a small painted jar, ornamented with double black bands, and a complete small jar 4 inches in diameter, of rather friable clay, unpainted

Finds in cinerary pots—The pot in the middle of the row, Su.v *b* had its mouth crushed by a large flat stone which had once been placed to cover it and was now found within the cavity The pot measured 29 inches across at its widest and had a height of over 31 inches Amidst the earth filling it ashes and small fragments of calcined human bones were found throughout Against the inside wall lay a jar of unpainted fine clay Su v *b* 1 (Pl V), also containing ashes with a disproportionately small foot closely recalling small jars of the same shape found in cinerary pots of Pēriāno ghundai[9] A small jar Su v *b* 3 (Pl VII) of identical type is of remarkably fine clay and bears a dark red slip, but no pattern There was found inside also the fragment of what seems to have the elongated foot or stand of a large dish or bowl (Su v *b* 2) resembling those found both at Pēriano ghundai and Dabar kōț The lowest pot Su v c, about 30 inches wide in the middle, had its side crushed in by the weight of the pot above it Within there lay amidst ashes and calcined bone fragments the small jar Su v c 1 (Pl VII) A larger one lay at the bottom having a maximum width of 11 inches It had suffered badly from crushing but its contents of ashes and bone fragments could be clearly made out

Burial customs—The contents of all three pots as described make it quite certain that they had served for cinerary deposits That these were put inside after the pots had been placed in the ground is obvious on comparing the thinness of the walls of the pots only 6/16 of an inch on the average, with the great weight of the receptacles when filled They could thus not have been carried without breaking The proof here afforded of burial customs identical with those observed at Pēriano ghundai, Moghul ghundai and Dabar kōt is distinctly



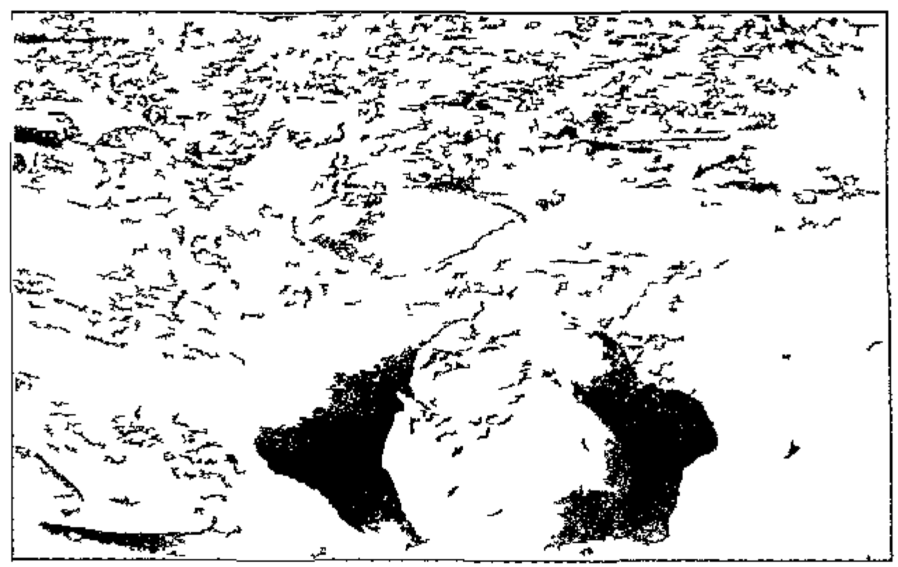
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important as it confirms the quasi chronological conclusions to be drawn from the general evidence discussed below [10]

Ground within walled area —An examination of the ground within the walled area revealed in most places indications of ancient occupation in the shape of pottery debris and earth reddened by fire But denudation combined with alluvium from the ridges around was bound to efface here all distinct traces of structures on the surface At one point about 50 yards to the south east of i a trial trench revealed shallow stone foundations about 3 feet thick for the walls of a small quadrangular structure But as nothing was left of the walls themselves apart from burnt earth evidently due to a conflagration I preferred to turn the scanty available labour to the excavation of some structural remains by the side of the Nullah descending from the gate at the south western corner

Dwelling cleared outside S W corner —They were indicated by lines of stones exposed on the surface Here at a distance of about 20 yards to the south west of the gate the small building Su iv a was cleared as shown in the sketch plan Pl 4 Its outer walls 2½ feet thick could be traced on the north and east for 25 and 29 feet respectively They were built of sandstone slabs roughly set in the same fashion as in the great enclosing walls They stood solid to a height of about 5 feet while the interior walls showed stone masonry only to a height of about 3 feet and above that what seemed to be mud bricks Towards the west the surviving height of the walls decreased owing to the rise of the slope on which the building stood That it was a dwelling is proved by the character of the numerous interesting small objects brought to light but what the special destination of the several little apartments within was could not be determined In the passage 1 only 4 feet wide which runs outside the east and south walls of the room 2 three round stone drums were found roughly curved and placed against these walls They measured 11 across and were 8 high [11] There can be little doubt as to their having carried wooden posts But why these should be needed just in this position is in view of the narrowness of the passage not clear

Pottery jars and cups —Among the finds made here the many jars and cups all plain may on account of their number receive first mention As the specimens reproduced in Pl V VII (Su iv a 1 2 5 8 12 13 20 24) show they are very varied in size and to some extent also in shape Most of them in the latter respect resemble the jars and cups found at the chalcolithic sites of Zhob (Periano ghundai and Moghul ghundai) and Sistan as a reference to the plates illustrating these will demonstrate [12] Somewhat different is the jar Su iv a 12 (Pl V) widely bulging

[10] It appears to me very probable that Major Mockler s descript on (*loc c t* p. 12o) of wide mouthed earth n pots about t o and a half feet h gh filled with earth stones bones (oc a ionall charred) teeth charcoal and n one a small knife refers to exactly s milar cinerary depos ts They are sa d to have been found w th n small oblong enclosures roughly built of stone on mou ds at the foot of the eastern wa l Major Mockler calls th m Bahman the term applied by Baluch to any anc ent struct ures.

[11] Three flat round stones of about the same s ze which Major Mockler found n a s ructure no long r trace able and which he took for pedestals of idols (*loc cit* p 1°4) may ha e served a s m lar purpo e

[12] See A *Baluch Tour* Pl VII VIII X *Inner ost As a* n. Pl CXIV

in the middle and narrow mouthed Su iv a 24 (Pl VI) is also rather peculiar in its shape and, like the other miniature cups shown in the same plate seems to be intended for a toy A very curious little piece is S i iv a 23 which has a small hole at one end of the top [As Mr Mackay points out to me it is meant for a whistle] It is of interest to note that besides two painted potsherds of red ware one with a kind of hour glass pattern Su iv a 17 [13] there were found in this ruin also two fragments of grey ware One (Su iv a 3 Pl VII) of them shows a pattern in a faded brownish purple which recalls ornamentation frequent in the funerary vessels of the Shahi tump mound to be discussed below The other grey fragment Su iv a 25 (Pl VI) is from a small bowl and of remarkably fine and hard ware very different from the poor fabric to be found among funerary ware of Shahi tump

Miscellaneous finds in Su iv a —Fragments of clay bangles greatly varying in thickness (see Su iv a 9 Pl VII) as well as of bangles cut from shells (Su iv a 26 Pl VI) were numerous The purpose of the baluster like clay object, Su iv a 4 (Pl VII) is not clear We may safely recognize an import in the fragment of well made light lilac coloured glass Su iv a 19 from the rim of a bowl As it was found some four feet below the surface its antiquity is not subject to doubt Several of the stone blades a dozen or so in all including the largest Su iv a 16 (Pl VI) were excavated close by at the same depth From the small room to the north the floor of which apparently lay on a somewhat higher level there came besides many of the objects already mentioned the fine copper celt Su iv a 10 (Pl VII) 5 1/7" long and over 2" across at its broader end as well as fragments of a copper knife and copper needles (Su iv a 18 18a Pl VI) The discovery of these miscellaneous objects in the same small building all pointing jointly to occupation in chalcolithic times affords full support to the conclusion which the examination of the surface finds has already led us to draw

Clearing of structure Su iv b —At a distance of about 30 yards to the south of this ruin remains of another small building adjoining the rocky slope could be traced Parallel to a stone wall 3 feet thick and standing to a height of less than that there was cleared a second shorter one to the west at a distance of about 6 feet On a small semicircular projection formed by this wall there stood a wide mouthed pot probably once intended to hold water Below it in a small recess built against the natural slope there stood a second and larger pot having a height of 23 inches with a maximum width of about 22 inches Only earth and small potsherds were found in either Of other objects there were found here some pieces of pottery, including one of painted grey ware, and the flasl Su iv b 1 (Pl V), a few stone blades and fragments of clay and shell bangles of copper and of a blue glass bead

Trial trenches below S E corner —There still remain to be mentioned trial excavations made on the small terraces of the ridge which descends from the south eastern corner of the enclosed area It has already been stated that lines of decayed walls could be traced here on the surface at a number of points

[13] Cf I Jes Pl CXIV K G 08 for a closely resembling design

Those cleared at the point marked vi proved to be mere remnants of foundations A piece of painted red ware Su vi 1 (Pl VII) found in the debris shows a geometrical pattern with interlacing scrolls and rows of pendent beads somewhat more elaborate than the designs on other painted potsherds from this site The perforated sticks of clay Su vi 2 3 (Pl VII) may possibly have served as a kind of knitting needles Some stone blades and fragments of clay and shell bangles were also found here as well as in the ground at vii where several trenches were cut as marked in the sketch plan Pl 4 without hitting structural remains The small cup like fragment of clay Su vii 1, which like the similar piece Su 5 a (Pl VI) shows little indentations and scratches at its outside bottom might perhaps have been used as a thimble

Period of chalcolithic occupation—Having completed the account of the observations and finds made on my visit to the site I may now in conclusion briefly call attention to those points which by themselves or by comparison with observations elsewhere may help to throw some light on the character and relative period of the civilization represented by its remains That the occupation of Suktagen dor dates back to chalcolithic times and to those only is sufficiently shown by the uniform character of the objects found there whether above or below the ground Two facts appear to me to indicate that the stage of development reflected by the relics of the site was a comparatively early one in the chalcolithic civilization of the region which comprises the Indo Iranian borderlands One important fact is the close resemblance of the painted pottery to that found at the early chalcolithic sites of Zhob and Loralai (Periano ghundai Moghul ghundai Sūr jangal) in decorative style colouring and fabric This resemblance links it also with painted ware from the prehistoric sites of Sistan The other fact is its striking rareness when compared with the great abundance of undecorated pottery of exactly the same superior fabric Taking the two together it seems to me difficult to avoid the conclusion that the ceramic remains of Suktagen dor point to a stage somewhat less advanced than that represented by the painted pottery of the sites in North Baluchistan and Sistan

Profusion of stone implements—In support of this conclusion reference may be made to the remarkable profusion of stone implements found all over the surface of the site and wherever excavation probed the ground below it The number of worked stones collected at Suktagen dor is disproportionately large in comparison with those from Periano ghundai and Moghul ghundai or with those which could be found over the far greater area of chalcolithic occupation represented by the mounds in the wind eroded desert of the Helmand delta

Rarity of grey pottery—In view of the indications just noted the presence of a very few pieces of grey pottery with two or three exceptions all unpainted is of interest Its rarity contrasts strongly with the prevalence of painted grey ware among the funerary deposits in the uppermost stratum of the Shahi tump mound This together with the coarser execution of the patterns found on the latter ware suggests a later date for these chalcolithic burials

While at Shahi tump the burial remains all consisted of complete *bodies buried in the ground* the cinerary vessels cleared at Suktagen dor v and those found in the course of Major Mockler's excavations prove funeral customs identical with those attested at Periano ghundai and Moghul ghundai

Absence of Nal type painted ware—This difference in funeral practice deserves particular notice in view of what must be pointed out here in connexion with two *negative observations* concerning the ceramic remains of *Suktagen dor* The systematic excavations carried out by Mr Hargreaves at the burial ground of the Sohr damb of Nal have conclusively proved there the association of burials containing complete bodies interred in the same fashion as at Shahi tump with a type of painted pottery which may conveniently be designated as the Nal type This painted ware is characterized by patterns mostly geometrical executed in different colours and elaborate design largely composed of scrolls and curved lines Plentiful specimens of it undoubtedly from vessels in ordinary use of the living were found at numerous sites of Kolwa and Jhalawan[11] But at Suktagen dor not a single potsherd of this type could be traced Nor were any such patterns to be seen at Shahi tump where the painted patterns on the funeral vessels of the topmost layer are closely related to those of the red painted ware of Suktagen dor and the above mentioned early Zhob sites though executed with far less care and with colours easily effaced[a]

Absence of terracotta figurines—On the other hand the Shahi tump mound in its lower layers composed of the debris of dwellings has furnished a large number of terracotta figurines of exactly the same character as those which were gathered in plenty from the Kolwa and Jhalawan sites showing painted pottery of the Nal type They represent either a humped bull or else the upper portion of a female figure which judging from *the elaborate head* dress and other ornaments may be taken as that of a goddess Now a few of such terracotta figurines were found at the Zhob sites the painted pottery of which agrees with that of Suktagen dor but not a single one at the latter site If we consider all these indications conjointly and take account in particular of the stratigraphic evidence afforded by the finds at the Shahi tump mound the assumption may be hazarded that the occupation of Suktagen dor dates back to an earlier phase of chalcolithic civilization represented in the north by the two principal Zhob mounds and that the mounds with pottery of the Nal type belong to a later phase when interment of complete bodies took the place *of cinerary* deposits

If this assumption is right we should have to look upon the Shahi tump mound as preserving the burial remains of an intermediate period when cremation had given way to interment but the vessels used for funerary deposits with the bodies were still painted in a *style reproducing* the patterns of earlier chalcolithic pottery In the present state of our knowledge however it would

For specimens of such Nal ware, see Pl XX XXI XXIV XXVII.
Cf below pp 3 & 19

not be safe to disregard altogether the possibility of the distinctions just indicated in burial customs as well as in ceramic remains being perhaps connected at least partly with differences of racial origin or of cultural spheres I shall have occasion to return to this question further on

Character of Suktagen dor site —It only remains for me to refer briefly to what inferences if any can be drawn as to the character of the Suktagēn dōr site from its topographical position Major Mockler has already referred to the Baloch local tradition that the place was once reached by the sea and served as a bandar or harbour But he justly expressed his doubt as to this tradition being more than a guess intended to account for the shells and other marine deposits belonging to the geological formation of the low hills around [16] At present even small fishing boats cannot pass more than about 15 miles beyond the bar at the mouth of the Dasht river where it empties itself into the sea in the bay of Gwatar [17] That point is over 36 miles below Suktagen dor and it is difficult to believe that even if the rainfall and consequently also the river s drainage be assumed to have been considerably greater in prehistoric times than it is now, the river course could ever have served so far up for navigation by sea going boats Nor is the very limited area which is available for cultivation at this point of the left bank between utterly barren hills likely to have favoured a considerable agricultural settlement But Suktagēn dor occupies a position upon which convenient routes towards Kej converge from a number of little fishing harbours on the coast between Gwatar Bay, Pasu bandar and Gwadar These routes are now much used by the considerable fishing trade which finds its way from the coast into the interior of both British and Persian Makran and this traffic accounts for the present Sintsar posts situated close by on both sides of the river The junction of these routes may well have claimed some importance in prehistoric times also

CHAPTER V.—REMAINS ON MAKRĀN COAST

SECTION 1 —OLD REMAINS NEAR GWĀDAR

On January 23rd I started from Suktagēn dor for the coast of the Arabian Sea My visit to it was prompted by the intention to examine two localities near the little harbours of Gwadar and Jiwanri where Major Mockler had noticed small 'dambs' marking old burial places But a motif quite as strong perhaps was the wish to gain some personal acquaintance with at least a portion of that coast of the Ikhthyophagoi along which Alexander s fleet under Nearchos had slowly made its way from the mouth of the Indus towards the Persian Gulf and which at more than one point had seen the great

[16] Cf *J R A S* 1877 p 126

[17] See Captain R G Lockwood s account of the terminal course of the Dasht River in Macgregor *Wanderings in Balochistan* 188. p 70

conqueror himself pass by. The stretch of the coast between Gwādar and Jiwani which my tour allowed me to see did indeed give me some personal impressions of the inhospitable nature of the ground and enabled me to visualize as it were the difficulties and trials which attended this concluding phase of Alexander's Indian enterprise. But the portion of the coast actually seen was too short to justify in this place any attempt to review the much discussed questions raised by this famous retreat. My account here will therefore be restricted to a description of what antiquarian remains came within the reach of my survey and to brief indications of their topographical setting.

March to Gwadar.—Our first march towards Gwādar led through low broken hillocks stretching south of the Sajidi range and across completely denuded peneplains to the foot of a south-western outlier of the coastal range known as Garre-kōh. From the halt there made at the water-hole of Pīshal the port of Gwadar was gained next day over a gently sloping glacis of detritus and a belt of scrub-covered sand dunes extending along the sea shore. The town of Gwadar is situated at the southern end of a flat and narrow isthmus of sandy ground which joins a steep rocky headland some nine miles long to the main shore line. The headland, as similar promontories rising from the sea at Pasni and further east, show, is a remnant of an otherwise submerged outer hill range. It affords shelter in roadsteads for such craft as can enter the shallow bays on either side of the isthmus. The sea around swarms with fish, and just as fishing is now the main industry of Gwadar and the export of its products the staple trade of the port,[1] it is likely to have secured some importance to the place already in early times.

Maritime relations of Gwadar.—No direct evidence is at present available as to whether navigation along the coast of Makran had in prehistoric times played an essential part in establishing and maintaining relations between the Indus region and the territories adjoining the Persian Gulf, including Mesopotamia. In Achaemenidian times coastal trade of this kind could scarcely have prevailed to any large extent, else the dispatch by Alexander of the fleet under Nearchos would not have borne the character of an exploratory expedition. But the enterprise which makes the present sailors of Gwadar, mostly Meds, with their native craft seek ports as distant as the Malabar Coast and Zanzibar may all the same be of old growth. Of the oversea relations of Gwadar there is significant political evidence, for the town of Gwadar and the territory which extends in an arc up to the foot of the hills from a coastal base measuring about 30 miles belong since the last quarter of the 18th century to the Sultans of Muskat. Much about Gwadar town, especially the modern fort which guards the approach to the town from the narrow isthmus, seemed to me to bear a curiously Arabian look.

Muhammadan domed tombs at Gwadar.—The remains of antiquarian interest at Gwadar town are few. The mound in the middle of its mean

[1] The *Makran Gazetteer*, p. 289, puts the number of fishing boats belonging in 190[illegible] to Gwadar at 646, in addition to 93 large native craft. Of the population, then reckoned at about 4,3[illegible]0 persons, some 3,700 were Meds, practically all fishing folk; cf. *ibid.*, p. 230.

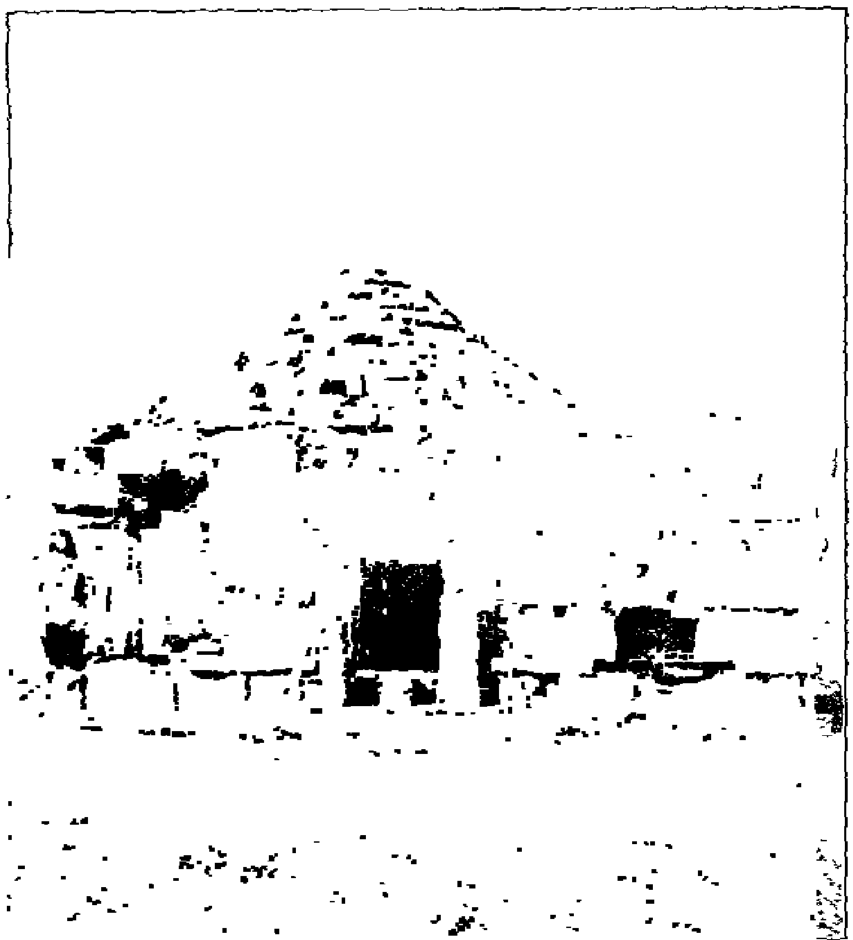


Fig. 19. Ruined Gumbaz south of Gwadar town, seen from east.

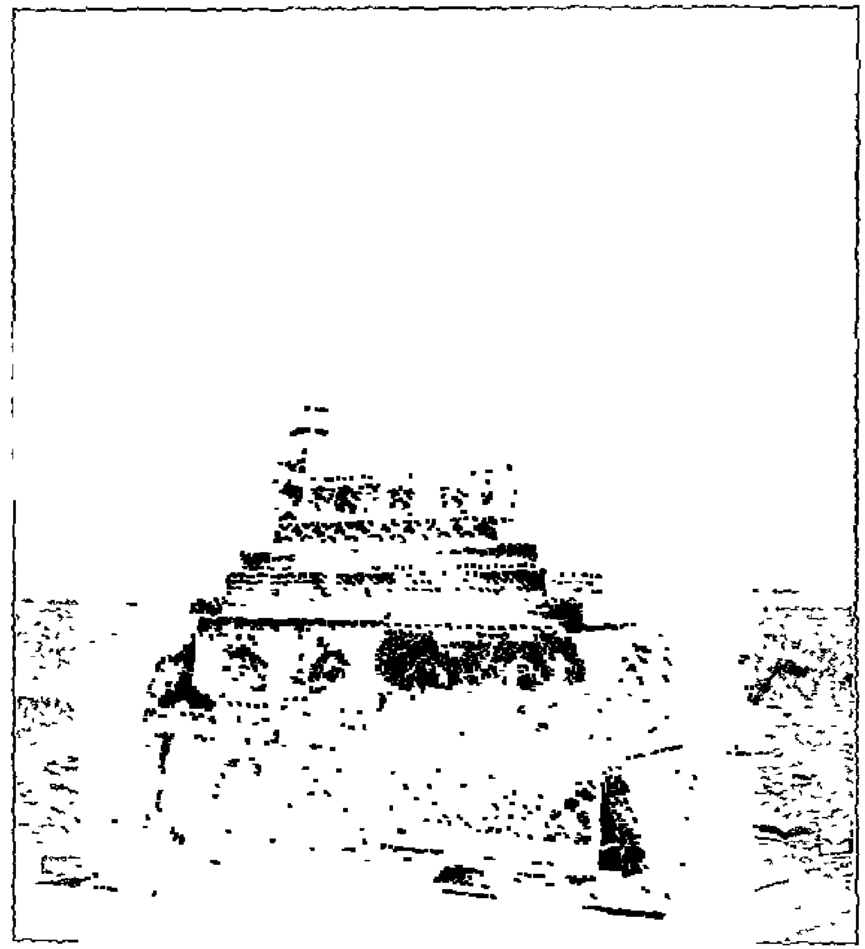


Fig. 20. [illegible] Masaud's tomb, [illegible], Baghwana.

fly infected lanes which bears the small and now abandoned old fort is probably composed of ancient debris But the high dwellings which occupy its slopes make close examination impossible To the south of the town Muhammadan cemeteries stretch along the foot of the precipitous cliffs with which the promontory above referred to falls off eastwards to the beach Near their southern end are found two domed Muhammadan tombs or Gumbaz' built with slabs of somewhat spongy sandstone One is almost completely thrown to the ground while the other, as seen in the photograph (Fig 19) still shows its essential architectural features These comprise a dome, constructed with horizontal courses and resting on four monolithic quadrangular pillars and enclosing walls which form a square measuring 26½ feet outside on the plinth The wall facing south through which the entrance lies has almost completely disappeared The other three walls have in the centre arched niches which originally seem to have all been closed on the outside Small arched windows provided with screens pierce the walls at the NW and NE corners Simple arabesque carvings in low relief decorate the semi detached columns on the outside of the niches and windows and traces of them remain also on the masonry courses inside the dome The architecture of the small structure agrees with the date 873 A H (A D 1468) which an inscription recorded in the Makran Gazetteer but no longer *in situ* indicates as the date of its completion

Barrage on Batel plateau—From the end of the sandy plain occupied by these cemeteries a steep ascent of about 200 feet leads up the scarp of the promontory to a small plateau known by the name of *Batel* Passing from its edge for about half a mile over bare rock there is reached a narrow ravine through which the drainage of a trough like depression of the plateau further west finds its way to the sea By closing the upper end of this ravine the bottom of the trough is put under water in years of adequate rainfall and the ground thus heavily irrigated subsequently used for intensive cultivation At a distance of about 30 to 40 yards below the roughly constructed dam of earth and stones which serves as the present barrage there is found a very massively constructed embankment of quite imposing strength (Fig 23) It is built entirely of large blocks of stone and faced on the upward side with carefully dressed sandstone slabs measuring on the average 2×2×8" The dam proper is 34 feet wide and extends for a distance of 134 feet from the rock slope on the west Beyond this distance the dam has been completely broken, leaving the bottom of the ravine open for a distance of about 40 feet

Broken end of barrage—Slabs evidently from this destroyed portion of the dam are found scattered along the drainage bed which passes from the dammed up lakelet towards the broken eastern end of the old embankment The intact portion of this rises 9 feet above the level of the pool which I found covering its foot It bears on its top a very massive parapet-like wall built with carefully morticed stone blocks measuring up to 5 feet in length, 2 1" in width and 1 7" in height This wall ends with a well recognizable corner close to the broken end of the dam Through the middle of the dam and about

6 below the foot of the parapet like wall there passes a conduit 15 wide and 19" high This manifestly was intended to provide a means for keeping the embanked water of the reservoir at the desired level But so modest a conduit would not suffice on occasions when heavy rainfall might rapidly raise the level It may hence be assumed with some reason that the broken eastern end of the embankment was provided with one or more sluice gates intended to facilitate rapid drainage in such an eventuality Whether the destruction at this end was due to an exceptional flood or was intentional when the later barrage was raised further up I was not able to determine But it appeared to me very probable that the construction of this later embankment became necessary owing to the inevitable rise of the level at the bottom of the trough through silting

Supposed Portuguese construction—Local opinion as communicated to me appears to connect the ruined dam with the period of the Portuguese occupation of Gwadar in the 16th 17th century The very careful construction and the evident engineering skill which it betokens seem to support this attribution Considering that the water about Gwadar town obtained from shallow wells is brackish the reservoir created by the dam may well have been intended also to assure a more or less permanent supply of good water This is certainly utilized now a days as shown by the strings of donkeys we met descending with water skins from the rocky plateau of Batel

Burial cairns of Gatti—From Gwadar I visited on January 24th the small hamlet of Gatti at the foot of the conspicuous hill known as Jabal i Mahdi which rises with steep and fantastically eroded rocky crests immediately above the sea shore about 6 miles to the north east of the town Major Mockler in his previously noted paper On ruins in Makran[2] had mentioned here small 'dambs which from his brief description seemed to be of the same type as the burial cairns examined by me near Moghul ghundai in Zhob and traced also in Loralai[3] The examination of the remains fully confirmed this The first group of little stone circles was reached after passing for about a mile along the north foot of the wall like Jabal i Mahdi where rain water caught from its slopes permits of cultivation on patches of dammed fields On a small stony terrace situated about three quarters of a mile to the NE of the triangulated point shown by the map with the height of 1 344 feet there are some fourteen little stone heaps roughly circular in shape on a somewhat scattered lower terrace close by there are about forty more (Fig 21) In the centre of these stone circles from 5 to 7 feet in diameter and rarely more than a foot or two in height there is usually a patch of loose earth

Finds in cairns examined—A number of these little dambs seemed to have been previously disturbed Among the half dozen examined here the majority were found to contain in the centre a few bone fragments apparently human and unburnt and small pieces of coarse unpainted pottery In one

[2] See *J R A S* 1877 p 133

[3] See *A Baluchistan Tour* pp 46 sqq 64

there turned up numerous fragments of a small copper or bronze vessel On the surface of the lower terrace there were picked up a few potsherds with thick bluish green glaze and one showing coarse 'ribbing' on the outer surface A piece of such ribbed pottery was found also within one of the little 'dambs' of another smaller group situated about a quarter of a mile to the north west by the side of a dammed up field Others were empty Scanty as these finds were they sufficed to support the conclusion to be drawn from Major Mockler s account as to the relative age of these burial remains The fragments of iron and a green glazed bottle of elegant shape which he mentions among the objects yielded by the clearing of six 'dambs', combined with the above noted glazed or ribbed ware prove that these deposits like those of Moghul ghundai and those of Jiwanri to be described presently date from early historical times

Reasons for moving W of Gwadar—From Gwadar I decided to follow the coast to the small harbour of Jiwanri situated on the eastern shore of Gwatar Bay and near the mouth of the Dasht river My choice of this move westwards was prompted in the first place by the wish to examine the extensive series of 'dambs' obviously burial cairns, which Major Mockler had observed near Jiwanri but of which but a few had been searched by him [1] But at the time I also entertained some hope that it might become possible for me to visit two important sites, evidently of the same character situated on the Persian side of the border which Major Mockler had described These two sites of 'Damba koh' and 'Darmani ban' (corresponding to the Kuh i Kashu and Damba Kuh of the map Sheet No 31 G) lie in the practically independent Dashtiari territory, near the old bed of the Bahu river and within about sixteen miles of the Perso British border line But it was not considered advisable for me to visit them without being accompanied by an escort from the Makran Levy Corps and on this ground the higher political authorities felt obliged to withhold the permission I had requested for the visit Notwithstanding this disappointment however I had no reason to regret my decision for the results of my exploration of the Jiwanri site proved more interesting than expected On the other hand a move eastwards to Pasni would have probably implied a considerable expenditure of time without adequate antiquarian profit local information not indicating ancient remains in that direction

March along coast to Ganz—On January 27th we left Gwadar and after a long march skirting the desolate shores of Gwadar West Bay camped by the dry flood bed of the Pasao kaur some four miles above the fishing hamlet of Pishukan The march was made very trying by the icy 'Gurich' or north gale which had sprung up after the hot days at Gwadar and continued to blow with more or less violence all the time we spent by the coast With temperatures which at Panjgur sank as low as 22 degrees of Fahrenheit it helped to bring home the climatic amenities enjoyed by Makran On the following day our route led through and past headlands of clay capped by hard

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[1] Cf J R A S 187? pp 13? sq

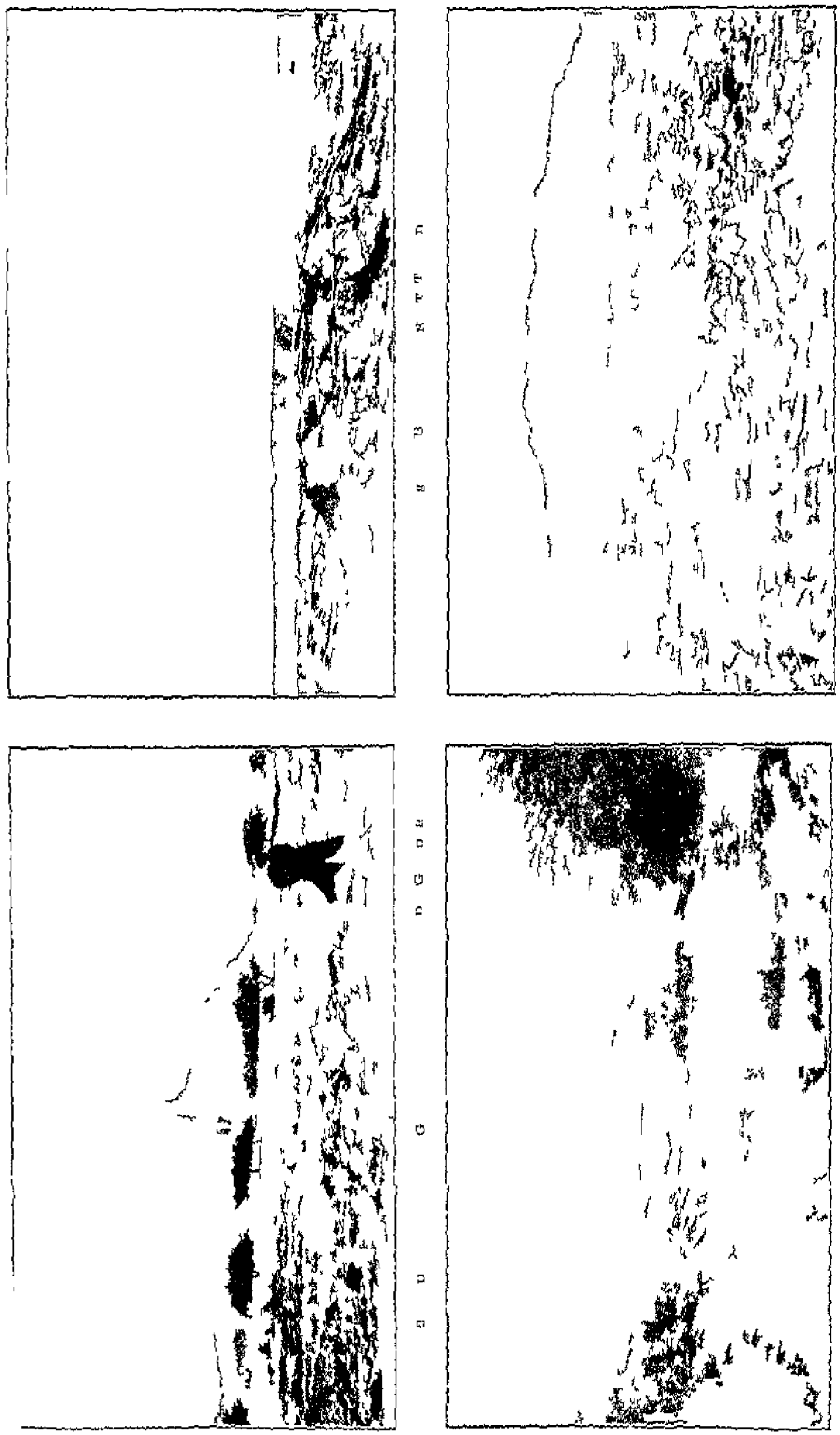
layers of limestone, which erosion has caused to assume fantastic shapes, to the little fishing village of Ganz Thence in order to reach the reported 'dambs' of Take dap we had to ascend to the rocky plateau on the top of the headland with which the small peninsula between Ganz and Gwātar Bay juts out into the sea There the track, impracticable for camels, led over absolutely denuded rocky terraces of calcareous sandstone until some seven miles from Ganz the little valley of Take dap was reached It holds some fields abandoned for many years and a tiny streamlet descending into the sea below

Burial cairns and middens of Tāke-dap—The reported 'dambs' which we examined next day were found to be scattered over an absolutely flat plateau of calcareous sandstone. This rises eastwards about 200 feet above the bottom of the valley and overlooks the bold cliffs which line the sea shore all along this southern face of the headland Over an area measuring about 306 yards from SE to NW. and some 170 yards across we traced altogether thirty-two 'dambs' or cairns They are invariably formed by roughly circular heaps of stone blocks collected on the spot and rise to a height of 2 to 3 feet (Fig 22) These little enclosures measuring up to 8 or 9 feet across always proved to contain in the centre loose earth right down to the natural rock floor In the majority of the cairns this earth was found to be mixed with the broken shells of crustacea Large spoil heaps or kitchen middens composed of shells of all kinds and up to 40 feet or so across, strew the plateau by the side of the cairns, in some instances the latter were found to be placed over them This makes it very probable that the plateau had in early times been occupied also by the living The very hard, almost fossilized, condition of the contents of these middens indicates their great age In some places there was evidence of their having been dug into in recent times in order to furnish material for the lime which is needed for 'liming' the fishermen s nets [5]

Finds within burial cairns—Within most of the cairns examined small fragments of human bones turned up and in half a dozen of them also fragments of coarse undecorated pottery The bones showed no definite marks of calcination A small pot of such ware about 6" high which was found badly broken, had its side fitted with two 'ears' perforated just sufficiently to permit a string to be passed through The fragment of a similar ear was found in another cairn An open mouthed cup, with flat bottom, Tak. I, is reproduced in Pl. V The bones of a fish and the shells which were found in a coarse pot within one of the cairns, together with plenty of fish bones around, obviously mark food provision made for the dead The only find of metal was a fragment of a copper pin or wire

Traces of early fishing settlement—Scanty as were the objects recovered by our rapid search of the cairns they *suffice* to make it clear *that the* remains of Take dap belong to a small settlement of fishing folk of primitive ways such as the Ikhthyophagoi whom Alexander's fleet encountered on

[5] I egard ng this process of l ming of nets as now practised on the Makrān coast cf *Makran Gazetteer*, p 203



its voyage along this coast The little inlet of the sea at the mouth of the Tal e dap valley may well have served as a convenient shelter for small fishing craft The plateau high above it was perhaps used as a breezy resort during the torrid summer or as a place for occasional feastings before it was occupied by the cairns raised over remains of the dead The question as to the disposal of the latter will best be considered in connexion with the far more extensive burial remains traced near Jiwanri This small harbour with a population of some 500 people mostly engaged in fishing was reached the same evening from T ke dap most of the seven miles march having led across a bare rocky tableland

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SECTION ii —THE DAMBS OF JĪWANRI

The plateau of Lak —At a distance of close on two miles to the north of the large cluster of mat huts which forms the village of Jiwanri there stretches a narrow but long plateau with the general direction from west to east It is known by the name of *Lak* At its western end where it commands a fine view across Gwatar Bay it rises very abruptly to about 150 feet above the sandy foreshore of the sea Eastwards it gradually merges in the rising tableland its relative height above the ground to the south diminishing to 60 70 feet Here at a point about two miles from the sea shore it is crossed through a small gap by the route which leads to Ganz The plateau has its greatest width over 1 000 yards as the sketch plan Pl 5 shows at its western extremity Thence it gradually narrows eastward and becomes more and more indented from the south by eroded ravines while it keeps a fairly straight line where it drops with a steep scarp to the north The surface on the top of the plateau is formed by a layer of hard calcareous sandstone Below this layer which is nowhere more than about 5 feet thick lies clay easily affected by erosion whether of water or wind Hence everywhere along the plateau edge the hard rock of the surface is being gradually undercut and blocks large and small which have thus become detached from the top layer strew the eroded slopes

Groups of burial cairns —Burial cairns of the same type as described at Take dap but somewhat larger are to be found on the top of the plateau over a total distance of about 2 250 yards from west to east As the sketch plan Pl 5 shows they occupy two main areas one in the extreme west of the plateau the other about half a mile farther to the east The latter area comprises the majority of the cairns the total number of which over the whole plateau is well in excess of two hundred Out of this number fully 178 were opened and examined by us in the course of four days strenuous work For facility of record the scattered cairns were numbered according to groups their relative position was noted at the time and is marked with approximate accuracy in the sketch plan [1] Two of the groups I and II comprising 45 and 17 cairns

[1] Individual cairns were marked at the time of examination with small Roman figures e.g. I. vii etc In the sketch plan these numbers have for want of space been shown with Arabic figures.

respectively are situated at the extreme western end of the plateau, while a third with about 30 cairns left unsearched lies about 400 yards to the south east of them on the opposite side of a shallow dip in the plateau top The other three groups III V occupy for the most part narrow tongue like portions on the east of the plateau depressions and ravines of different width all due to erosion divide them from each other The numbers of cairns examined in these groups and but few are likely to have escaped here attention were 77 in III, 22 in IV and 16 in V Several of those situated in groups III and IV along the very edge of plateau tongues were found undercut or partly destroyed through erosion As this is likely to have steadily progressed for centuries the probability is great that the number of cairns was in these groups originally larger

Construction of cairns—The cairns in all the groups resembled each other so closely in method of construction and in the character of the deposits for which they were built that a general description of these essentially uniform features will be appropriate here The cairns consist throughout of an enclosure formed by building up walls with rough pieces of the hard calcareous sandstone found on the spot around an earth filled interior varying from 3 to 5 feet in diameter These enclosures are almost throughout of a roughly circular or oval shape and outside at their foot measure from 8 to 12 feet in diameter or across their greater axis Less than half a dozen only of cairns near the northern end of group III showed a roughly quadrangular shape being probably identical with those mentioned by Major Mockler as square shaped [2] Two of them had their enclosures almost levelled to the ground obviously in the course of some previous search In no case did the walls of intact enclosures rise to more than 3 feet above the hard rock surface of the ground Nowhere was there any trace of a door' to these enclosures such as Major Mockler had found in the dambs of Damba koh and as he was inclined to suspect the existence of here, too

Deposits of human bones—Within the earth filling the space thus enclosed there were found in most cases fragments of bones, generally very small But in numerous instances (*e g* I xxii, III xvi) fairly large bone fragments were found which could be readily recognized as human such as thigh bones arm bones knee caps etc None of the bones showed distinct marks of calcination nor were bone fragments or ashes ever found within the vessels deposited in the cairns Considering how small the bone fragments from most of the cairns were not much importance can attach to the apparent absence of bone remains from a number of others for as time would not allow of very careful sifting of the earth such small pieces of bone may well have escaped attention

Ceramic remains—The same observation applies also to ceramic remains In the vast majority of cairns the burial deposits were found to include either coarse potsherds of varying sizes mostly small or else more rarely complete

See *J R A S* 18 7 p 132
See *Id* pp 127 132

vessels The latter were very often found intact but in other cases had suffered damage while buried owing to the inferior quality of their fabric or otherwise Before I proceed to detail individual finds of interest in these burial cairns reference may conveniently be made here to two negative observations of some significance Nowhere on this site whether within the cairns or outside them on the surface was a single stone implement found Nor did I observe shells of crustacea such as were abundant at Tal e dap among any of the deposits

Finds of complete vessels.—In recording notable individual objects I propose to distinguish those recovered from the several groups not so much because these objects differed essentially in character but as on account of a certain divergence in the relative yield of each group Of the two groups at the western end of the plateau one II adjoins a Muhammadan tomb and Ziarat known as that of Khidar Sahib situated on the very edge of the cliffs descending to the foreshore The other group I with more numerous cairns is separated from it by a shallow rocky dip draining northward At both groups the number of complete vessels found was small but as the specimens reproduced in Pl V VII show a variety of typical shapes is represented among them The pot II xii (Pl V) of a coarse red clay is flat bottomed like all the vessels from the site and has its counterparts in several other pots of somewhat larger size The flask II x a (Pl VII) is of an elegant form narrow mouthed and looks as if intended for oil or an unguent Very characteristic is the flat bottle I iv (Pl V) of thick but coarse red ware which as three ears on the circumference and a groove running through them show was intended to be hung or carried upright The spout is set aslant obviously to facilitate drinking from the pot while in this position Its upper surface is decorated with shallow grooving I viii (Pl V) is a specimen of several small lota shaped pots The small flat dish from I iii is of fairly hard dark grey ware Of the same fabric is also the small jar II xi (Pl VII) found with its stopper

Evidence of later origin—The shapes of these vessels quite different from that of the chalcolithic ware and betokening advanced skill in the use of the wheel would by themselves point to a latter origin The find of a thick iron hook II x (Pl VII) no doubt intended for fishing fully agrees with this It deserves to be noted that scraps of iron are mentioned also by Major Mockler among his finds in the eleven dambs which he opened at this site Apart from the hook just referred to no metal object nor any object which might have served as an ornament was recovered from the cairns searched by us in the groups I and II As this result is in striking contrast with the comparative frequency of trinklets, etc recovered from the groups III V, the conclusion suggests itself that the burial remains of the latter belonged to a rather more affluent class of the ancient population In this connexion I may point out that to the south of the plateau there extends a considerable area of arable land which though badly neglected by its present owners of the Shahz da tribe might at one time have provided agricultural resources of some consequence

Ceramic objects from groups IV V—The types of pottery vessels and of other deposited objects found in the cairns of groups IV V were so uniformly distributed that it will be justified to describe them without separating these groups which as the sketch plan shows, closely adjoin Taking the ceramic finds first it deserves to be noted that several cairns contained a number of complete pots jars o bottles up to a total of four thus *e g* III vi vii xvi, lxxvi IV ii These like the vessels found singly were usually placed against the inner face of the enclosing wall Among undecorated vessels there were particularly frequent large flat-bottomed pots of coarse reddish ware up to 12 inches in diameter with narrow spouts mostly placed sideways Of the specimens reproduced in *Pl* VIII IV ii and *III lxii* show shapes represented by several examples In the case of III liv there is evidence of the vessel having been meant for hanging a grove encircles the convex keel shaped projection of the side and is provided with four perforated ears through which a string was passed III xxxi is of interest as it shows two narrow spouts one in the centre of the top and the other placed on the side obviously to facilitate drinking Smaller pots too with narrow mouths in the centre of the top were provided with ears either two or four for hanging as III vii and the painted specimens III lxxvii a (Pl IX) and III xxxiii show The plain jar III viii (Pl IX), with a wider mouth illustrates a type repeatedly represented

Shapes of vessels—Among the painted ware the last two shapes also *occur but as the specimens reproduced in Pl IX (III xvi a b* xxxiii *lviii IV ii)* show usually with two or four ears provided for hanging In addition to these shapes we meet here also with examples of jars (III xvi c lxxvi b Pl IX) which have by the side of wide mouths also small pointed spouts resembling those of a modern milk jug A fine and almost classical looking shape is that of the painted vase III lxxv a (Pl VIII) which alone among the pottery of the site is provided with a hollow high base

Painted patterns on vessels—Turning to the decoration of the painted pieces it must be noted in the first place that the colour of the design usually black but in a few pieces a dark buff appears always to have been applied after burning and therefore is liable to be easily effaced by rubbing or the application of water This leaves little doubt as to this decorated ware *having been* specially prepared for funeral purposes The same is suggested also by the often very inferior make of the body Among the decorative designs that of the vase III lxxv a (Pl VIII) is the most interesting as the principal motif a scroll of carefully executed volutes exhibits a certain resemblance to motifs known to classical and other western art Coarsely painted parallel bands border it above and below with vandykes inserted *immediately* above the scroll A closely corresponding scheme of decoration is seen also on the graceful little jar III xvi c (Pl IX) A band of volutes forms part of the decoration on III xvi a (Pl IX) and much effaced on III lviii (Pl IX) also In III xxxiii (Pl IX) large vandykes take their place A pair of double volutes branching from a central stem is seen as a detached ornament on III xi (Pl VIII) A similar ornament is found on the top of the *flat* small mouthed pot III xxxiii a

(Pl VIII) simple wave lines and vertical hachures decorating the side Else we find simple wave lines inserted between parallel bands as in III vi (Pl VIII) and III xvi b c and lxxii b (Pl IX) In IV vii (Pl. VIII) the central zone between such bands shows a succession of semi circles formed with parallel lines and separated by a band of hachured triglyphs On the large jar III xvi (Pl VIII) the place of the triglyphs is taken by upright ornaments comprising what look like two highly stylized trees Quite by itself stands the small gracefully shaped jug III xxxi (Pl IX) with a very narrow mouth and a now broken handle Its surface badly rubbed still retains portions of a creamy white glaze which has turned iridescent

Miscellaneous deposits—Among the miscellaneous deposits in cairns of Ji III IV are two well preserved copper bracelets or anklets III xvi e f (Pl VII) which were found placed over the mouths of two small jars They appear to bear simple incised designs which still await cleaning From quite a number of cairns (III ii,lvii lxxvii IV ii,xvi V vii ix) there were recovered small thin rings sometimes several stuck together which appear to be silver The copper ring found together with a carnelian bead in IV xiv, is provided with a bezel Fragments of small iron implements no longer recognizable turned up in III ix xiii The use of iron conclusively proves that these burials date from a later period than that of the chalcolithic sites in Makran This fully agrees with the inferences to be drawn from the character of the burials and the ceramic deposits found with them The use of iron accounts for the bones found in III xiii (Pl VII) and III xx

Funeral customs resemble those of Moghul ghundai—The evidence of the observations and finds above detailed suffices to prove close agreement between the funeral customs uniformly prevailing at the Jiwanri site and those which I had first occasion to note at the burial cairns explored close to the Moghul ghundai mound in Zhob [4] At the latter site Hellenistic motifs on some relief decorated small pots and the intaglio design on a seal furnished definite evidence that the burials could not date back further than the early centuries of our era No painted pottery was found at the Moghul ghundai burial cairns hence the help which such might have furnished for chronological determination is not available On general grounds however I should be inclined to assign to the Jiwanri burials an earlier date, though also within the historical period [5]

Exposure of dead bodies—There still remains the question to be considered as to how the bodies of the dead were disposed of at Jiwanri before remains of their bones came to be deposited within the cairns At the Moghul ghundai site the condition of the bone fragments all quite small seemed to indicate that they were left behind after cremation Among the corresponding remains of the cairns

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[4] See ... Baluchistan Tour, pp. 46 sqq

Here it may be noted that at the Damba koh site situated in the Dasht ... tract to the north west of Gwatar Bay and above referred to Major Mockler found a silver coin, apparently Parthian when ... one of the ruined dwellings of J R A S 1877 p 130

These dwellings are assumed by him probably rightly to belong to the same period as the many ... tombs or burial cairns found in close vicinity on the same hills In view of the extent and obvious interest of this site I must specially regret that the opportunity of visiting it was denied to me

on the Lal plateau there were found also large human bones while definite evidence of calcination was absent Hence the assumption seems justified that the bodies here may have been exposed to wild animals more or less after the Zoroastrian fashion and only such remnants of the bones as could be readily traced subsequently deposited in the cairns Doubts may arise as to how this could be done without the provision of the orthodox Dakhma

Practice of Oritai recorded—But that the practice in a primitive form was known in a region adjacent to the coast of the Ikhthyophagoi is proved by the mention which Diodorus account of Alexander's march from the Indus towards Gedrosia makes of the barbarous custom practised by the Oritai with reference to their treatment of the dead[6] For when a man dies his relatives naked and holding spears carry away his body to the oak coppices which grow in their country and having there deposited it and stripped it of the apparel and ornaments with which it is arrayed they leave it to be devoured by wild beasts The Oritai according to Arrian occupied the country situated immediately to the east of the Gadrosioi and evidently corresponding to the southernmost portion of Jhalawan together with the coast between the Purali and Hingol rivers[7]

SECTION iii—FROM GWATAR BAY TO MAND AND TURBAT

On February 3rd we started from Jiwanri northward in order to reach Mand near the Nihing which joins the Kej river from the west and with it forms the Dasht My choice of this route for the return journey to Turbat was prompted by antiquarian as well as practical reasons The move to the Nihing would offer an opportunity for the examination of certain old mounds in the tract of Tump which stretches along it towards the Persian border At the same time it was to enable us to pick up my Pathan orderly and a Khalasi who during our stay at Sul-tagun dor had through their own carelessness received very serious gunshot wounds and had since been undergoing surgical treatment at the hospital of the Makran Levy Corps post of Mand

Before the start from Jiwanri I was able to visit the supposed site of an ancient fort which according to the local tradition of Jiwanri once occupied the end of a clay ridge stretching towards the southern end of the roadstead and overrun by sand Here beads coins bits of metal and other small objects were said to be picked after rain No such relics were to be obtained at the time in the village and examination of the spot showed only fragments of plain coarse pottery and scanty remains of the walls of a ruined mosque

March to Suntsar—Two marches aggregating some 13 miles and done in the face of the cutting Gurich still blowing brought us *viâ* Gabd village to the Levy post of Suntsar The route led across the wide alluvial flat to the east of the terminal course of the Dasht river until this was crossed to the right

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6 [illegible] XVII c [illegible] by McCrindle *Invasion of India* p 297

7 [illegible] xx

banl a couple of miles below the Suktagen dor site Except for small patches of cultivation between Gabd and the hamlet of Kalatul all the ground tra versed was a waste either of bare *shor* encrusted clay and sand or low broken ridges Nowhere did I notice any trace of former cultivation such as with the help of canals or embankments might well have been practised here From Suntsar we reached the fort of Mand after two long marches totalling about 51 miles The first lay across utterly barren stony plateaus furrowed by dry torrent beds which descend from the watershed towards the Persian borde The second led across a western extension of the Gokprosh hills which skirt the Kej valley on the south Here the appearance of some vegetation above an occasional spring fed pool seemed to suggest approach to less arid ground on the Persian side of Makran

Koh i-kalat W of Mand—From Mand fort which guards the Nihing tract against incursions from the lawless Pishin tract across the Persian border I was able in the course of a day s long ride on February 7th to examine a series of small ruined sites which the assembled greybeards had reported in the neighbour hood Proceeding westwards up the gently rising trough of the wide valley I was shown first the small rocky hillock known as *Koh i-kalat* at about 3 miles distance from the fort It rises to a height of some 60 feet above the sur round ng Khushkaba fields Remains of rough stone walls with masonry resem bling that seen in the uppermost structures of the Turbat Miri cover its slopes The few fragments of painted pottery showing simple geometrical patterns in black did not indicate early occupation nor was such to be inferred from a piece of blue glazed ware The top of the hillock is only 20 yards long and some 13 yards across and hence could afford room only for a small place of safety

Site of Tumpak—Riding some 7 miles farther through stretches of thin jungle we reached another small side known as *Tumpak* not far from the Persian border It comprises a small mound of whitish clay about 20 yards long and 8 feet high and a narrow belt of pottery strewn ground surrounding it Among the plentiful potsherds a considerable number were painted, show ing geometrical patterns in black also brown over red or buff ground The prevailing motifs were zigzags triangles and triglyphs As no glazed or ribbed pieces were found it may be concluded that occupation was confined to prehistoric times

Karagi site—The other two small sites were found to be situated to the north east of Mand fort That known as *Karagi* not far from the hamlet of Gobar occupies the top of a stony ridge at the foot of the low hills which flank the Nihing river on the west It lies at a distance of about 6½ miles from the fort The top of the ridge, about 150 yards long from east to west and from 30 to 50 yards wide is covered with remains of rubble built dwellings constructed in the same way as at Koh i kalat As the ridge is completely isolated and at its eastern end rises to a height of over 100 feet the position is a naturally strong one The few painted potsherds found gave no definite indication as to the time of occupation But judging from fragments showing ribbing and incised patterns

as well as from a few pieces of glazed ware this is likely to have extended into mediaeval times The terracotta fragment M K 1 (Pl X) representing a beast's head bears also a later look It was of interest to note traces of an old canal passing the foot of the ridge tradition alleges it to have once carried water from the Nihing river as far as Tump.

At present the fairly extensive cultivation of Mand is dependent wholly on Karezes or on rainfall Among the scattered groves of date palms which are watered by the former there rises within a mile from Mand fort the mound known as *Kohna kalat* to a height of about 20 feet It is manifestly of artificial origin but no ancient potsherds were to be found among the Muhammadan graves which cover it

Journey down Nihing R—At the hospital of Mand fort I had found the condition of our two wounded sufficiently advanced towards recovery to permit of arrangements being made for their transport to Turbat by motor lorry There I was called myself by two interesting tasks which the reconnaissances of my previous stay had indicated For this reason I was glad that the arrival of at least one of our lorries, successfully repaired from the damage their engines had suffered at that flooding nearly a month before enabled me to cover the distance to Turbat quickly and at the same time to survey whatever old remains had been reported along the route Irrigation from the Nihing river accounts for a string of small oases being found along its banks Starting down the valley on February 8th I first halted at the village of Tump which gives its name to the whole tract There I examined the high mound reputed to be old on which the modern fort held by the local family of Gichkis is built The continued occupation of the fort and the consequent absence of denudation may explain why I failed to trace here any ancient pottery on the mound

Prehistoric mound of Nazarabad—At the village of Nazarabad about six miles further down the valley we fared better Here a conspicuous mound rises to a height of over 40 feet at the edge the stony glacis descending to the village lands It measures about 95 yards along its southern foot Its slopes are thickly covered with rubble used for roughly built walls and traces of such can be made out at different points near the southern foot of the mound as well as on a kind of terrace projecting from its slope to the southwest

Chalcolithic pottery—Among the potsherds which mix abundantly with the rubble all over the slopes painted fragments varying greatly in body colour and patterns could be picked up in plenty It was hence of particular interest that almost at the beginning of our search we picked up a complete small alabaster cup Naz 1 (Pl X) and the small cup Naz 2 (Pl X) which by its shape and its geometrical design painted in black over a dark terracotta slip closely recalled corresponding pieces found at the early chalcolithic site of Periano ghundai [1] These finds were made in a cutting produced by erosion on the lower slope of the mound Smaller fragments with geometrical patterns of similar early type

[1] *For a specimen of such cups cf N Baluchistan Tour* Pl. VII P SW d 2.

painted either on a dark red slip or else direct on the terracotta coloured ground are illustrated in Pl X by Naz 3 11 In all these pieces the body is a fine well levigated clay just as is usually found in the chalcolithic pottery of the Zhōb and Sul tegen dor sites Similar patterns were found painted in black buff or brown but in a coarser fashion on numerous potsherds of less finished ware and of varied colours as seen in the specimens Naz 11 a 18 26 27 33 38

Grey painted pottery —Special interest attaches to the numerous fragments of fine grey ware (see Naz 20 25 28 31 for specimens) which show geometrical patterns painted in black rarely in a brownish purple The motifs and execution agree with those found on the grey pottery from Prom mounds and also on the funerary grey ware of Shahi tump to be described presently But in contrast to the latter the painted decoration is fast while the body is of superior strength and hardness There can be no doubt about the vessels to which these grey fragments belonged were intended for use by the living The decorative style of the brushwork on the grey ware and on the above mentioned coarser pottery of red buff or pink colour is so similar as to make contemporary production highly probable The fact that not a single fragment of glazed or relief decorated pottery could be found on this mound suggests its having remained unoccupied during historical times I therefore regretted that regard for the tasks awaiting me at Turbat did not allow of time for a systematic probing of its strata

Smaller mounds near Nihing R —Proceeding down the valley I next visited the site known as *Duchan* below the village of Asiabad and at a distance of about 4½ miles in a straight line from Nazirabad It proved to be situated by the side of a southern branch of the Nihing river s floodbed and far away from any ground cultivable at present Judging from the absence of any painted pottery among the rubble from decayed dwellings which for about a hundred yards covers what looks like a low natural terrace occupation did not seem to reach back very far here A third mound in this neighbourhood, called *Kasar o damb* was reported on the other side of the river and apparently about 3 miles to the north east of Asiabad this could not be visited by me within the available time Specimens of painted potsherds which were subsequently brought to me from there all look late coarse ware they include a piece showing the same voluted scroll as found on the vase Ji III lxxvi a (Pl IX) and the vases Ji III xvi a lviii (Pl IX)

Burial cairns near Nasirabad —From the village of Nasirabad some 4 miles to the north west of the junction of the Nihing and Kēj rivers I visited on February 9th a series of small 'dambs situated on the wide stony Dasht stretching down from the hill range of Kēj band in the north and at a distance of about 1 to 1¼ mile from the village They are small burial cairns of the same type as described at Jiwanri heaped up with rough stones from the shallow flood channels which furrow the glacis and along which they are scattered at irregular intervals We counted altogether 72 of them, but as many are little more than rough stone circles only a foot or two in height with a patch of earth in the centre some others may have escaped notice

Near most of them a few potsherds of coarse red or buff ware could be picked up on the surface. With only few digging implements at hand our search of these dambs was restricted to less than a half a dozen. Apart from small fragments of bones apparently human found in all cairns opened there were recovered from two cairns three pots of coarse red ware with a whitish outer surface. The smallest of the three contained a few bone fragments. In a third cairn small pieces of some iron implement turned up. These finds sufficed to establish the identity of the burial customs at this site with those observed at Jiwanri and Moghul-ghundai. On my first stay at Turbat I had already ascertained the existence of an ancient burial place of the same type but much larger in the vicinity of that chief oasis of Kej. Hence instead of delaying at Nasira had I decided to save time for its exploration by returning to Turbat the same day.

CHAPTER VI SITES IN THE KĒJ VALLEY

SECTION i.—THE BURIAL CAIRNS OF ZANGIAN

A rapid reconnaissance made from Turbat from January 7th had shown me that the site known as *Zangian-damb* comprises an extensive area of low rocky hillocks covered with burial cairns. It is situated about 3 miles to the south-west of the Turbat fort and headquarters. As the sketch plan Pl. 6 shows these remains are found in different groups along the wide floodbed of the Sorab kaur which descends from the Gokprosh range and joins the Kej river opposite to Kalatuk. The main groups of cairns extend along the right bank of the flood bed on either side of the caravan track which passes here towards Pasni. The area over which they are spread measures over 1,000 yards from east to west and about half that across where widest. The whole of this ground consists of much decayed little ridges and hillocks of dark calcareous sandstone furrowed by small drainage channels. Together with the utterly bare eroded hills around it presents a truly desolate appearance. The terrace-like westernmost portion of the ground lies about 30 feet above the bottom of the flood bed to which it drops with almost vertical cliffs. Further to the east the cairns occupy the slopes of hillocks rising some 50-60 feet higher.

The groups of cairns on the left bank are much smaller and are principally found at the foot of a gently sloping hill raising its top some 210 feet above the flood bed. In the latter are found some small springs of brackish water and a little scrub. The name of *Kambar-shor* also used for the site seems to apply properly to this portion of the bed.

Number of cairns.—In the groups on the right bank of the flood bed to which our work of three days was confined about 490 cairns were counted in all. But as many of the cairns are quite low and often difficult to distinguish from the little heaps of rough stones, the natural rock debris of the decomposed ridges over which they are scattered, it is probable that the total number is greater. Out of this altogether 69 cairns were opened among those which were

found on the triangular terrace to the west of the Pasni track and along the *right bank of the Sorab bed As some of the cairns were found on the very* brink of the clay cliffs which line the latter others are likely to have been destroyed through the progressive undercutting and fall of the bank

Shape and contents of cairns —The photograph in Fig 24 illustrates the general appearance of this ground and the typical form of the cairns Their walls of roughly heaped up stones usually form irregular oblongs with an approximate east to west bearing and enclose earth filled spaces from 5 to 8 feet in length and 2½-3 feet wide Within this space there were ordinarily found fragments of human bones in most cases very small together with pieces of plain pottery of reddish colour and coarse fabric In the majority of the bone fragments there were indications of calcination by burning In ten of the cairns examined there were deposited vessels from a single one up to a total of six They were placed almost always near the eastern end of the enclosed space and about 1½-2 feet *below the top layer of earth The shapes of the pottery vessels found* resemble in most cases those of the corresponding funerary deposits at Jiwanri Flat pots having small spouts on one side as seen in the specimens of Pl XI Zang I xiii and xxx, were common here too In the case of the former it is curious to note that owing to the construction of the vessel only about half of it could have been filled unless carried upright The very coarse body and imperfect firing observed in most of these vessels seem to point to their having been made for funerary deposit only

Decoration of pottery vessels —This accounts also for the poor preservation of the majority and for the effacement of the painted decoration in the case of those few vessels which had any In I ii this consists of parallel bands in buff red and black round the widest part of hachured sprays above them and a buff band with a hanging scroll encircling the top Another type of pot with a long straight spout like that of a modern teapot and a wide mouth is illustrated by I xiv and II x (Pl XI) the latter shows remains of a painted pattern with triangles hanging from a band round the neck Somewhat better preserved is a similar pattern coarsely painted in black over a whitish surface on the jug II xvi a (Pl XI) This is provided with two handles one grooved connecting the everted rim of the mouth with the shoulder the other meant to represent a loop of rope passed over the mouth for facility of carriage A similar rope like handle and spout with everted lips belong to a large pot I iv (Pl X) found completely broken An interesting piece is the vessel II viii (Pl XI) found with five other plain ones it is shaped to represent a bird perhaps a cock with a crested head serving for a spout a short tail behind and a mouth opening close to a handle on the top Specimens of a type repeatedly found also at Jiwanri are the two flat bottles II viii xvi b (Pl XI) provided with two ears on the keel shaped side for hanging The small flask I iii (Pl X) is of interest as with its shape size and small mouth it corresponds exactly to a similar flask found in one of the burial cairns of Moghul ghundai[1] Incised zigzag lines on the top and sides serve as decoration

[1] Cf. A *Baluch.* &c Pl X M v

Miscellaneous burial deposits—This close relation of the ceramic ware with that of Jiwanri and Moghul ghundai affords a chronological indication which is fully confirmed by the other funerary deposits recovered at Zangian These comprise besides fragments of copper and iron from small objects no longer recognizable a badly rusted and broken large iron sword blade from II viii and another smaller and similarly damaged iron weapon with what seems to be a bronze fastening at the hilt Both objects still await cleaning Of other deposits may be mentioned the decorated bone (or shell ?) disc II vii (Pl X) the pottery ring II xvi c (Pl X) and a few beads in stone The small figurine II vii a (Pl X) seems to represent a dog like animal and probably was used as a toy A novel feature in the burial deposits of this site was the discovery in two cairns (I xx II xxxix) of a horse s head It showed no signs of having been cremated like the human bones found with it and obviously proves that the funerary rites practised at the time included on occasion also the immolation of a favourite mount In conclusion it may also be noted that two small pieces of pottery with a thick coat of mat blue glaze were picked up on the surface close to one of the cairns

It is possible that a complete search of the cairns would yield other relics permitting a closer determination of the period over which the deposits here extended I therefore had to regret that after the prolonged labour claimed by the excavations at the Shahi tump mound there was not enough time left for resuming work at Zangian on a scale commensurate to the extent of the site without the risk of being unable within the available season to absolve the rest of my programme in the wide region eastwards For the same reason I had to forego the intended visit from Turbat to the side valley of Buleda northward where a series of similar small dambs or cairns were reported between the villages of Mianaz and Bit [2]

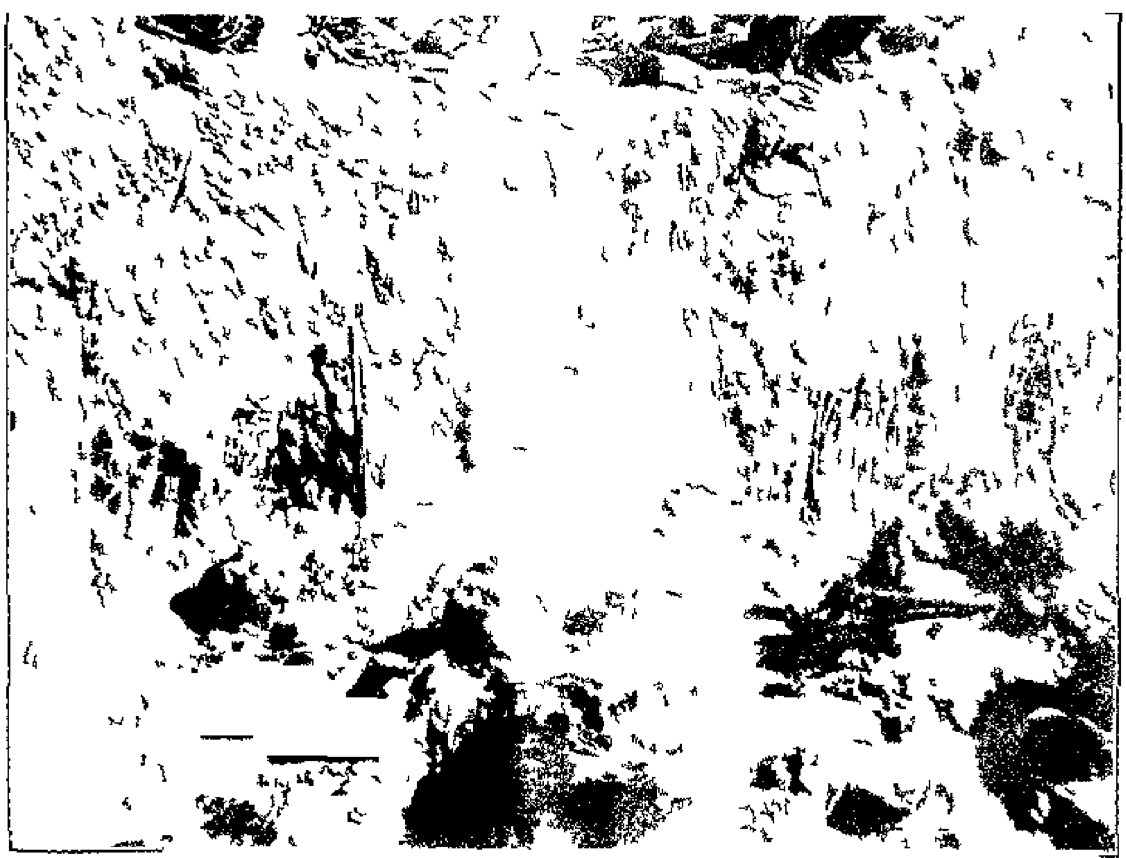
SECTION ii—THE MOUND OF SHAHĪ TUMP

Already in the course of my first reconnaissances at Turbat the mound known as *Shahi tump* (the royal mound) and situated about four miles to the west of the fort and headquarters had attracted my attention owing to the numerous painted potsherds of fine red and grey ware which could be picked up on its slopes among rubble from decayed stone walls It rises within about a hundred yards from the southern edge of the date groves of the village of Tump This takes its name from the mound and is one of those stretching along the left bank of the Kej river A short distance further down lies Koshe kalat one of the larger among these villages while beyond a stretch of bare clay a couple of hundred yards to the south of the mound a now abandoned Karez runs along the foot of the gently ascending glacis of the Gokprosh hills

[2] The *Makran Gazetteer* p 303 notes that there are many *dambis* or cairns on the banks of a hill torrent called the Dambani Kaur The torrent meant is evidently the one which the map shows as Daman Kaur about 3 miles to the east of Mianaz



FIG 9 S AH SU MOUND FILE FRO SOUTH EST DUP O T AT O



F 9 I RAI [illegible] F RO D OL [illegible] TO [illegible]

Mound traditionally respected—The name given to the mound seems to indicate some traditional respect for it I could not ascertain whether this had anything to do with the choice made by a holy man claiming to have come from Herat who a few years before had settled down at the southern foot of the mound His local disciples had built a small dwelling for him by the side of some trees and a well On the adjoining slope of the mound an enclosure had been laid out to serve as a mosque and a taikhana dug above it into the mound to provide a cool retreat for the teacher and his acolytes during the heat of the summer The fact of trees of some age growing on that side of the mound as shown by Fig 25 suggests that the spot also enjoyed some local veneration before the arrival of this holy person Fortunately by the time of my return he had started for a pious peregrination and thus no trouble arose about the disturbing effect necessarily accompanying the excavations which we carried on here from the 12th to the 23rd of February Fortunately too the employment of a large number of labourers up to 190 at one time was facilitated by the close vicinity of several villages

Size of mound—The mound as the sketch plan Pl [illegible] shows measures about 85 yards from east to west and but little more from north to south Its top rises to a height of over 27 feet but this may have been slightly greater before part of the top was levelled a year or two before to provide a small platform(b) for praying and teaching Erosion had caused the slopes to be furrowed with little ravines and had laid bare in them plenty of ancient potsherds as well as some other significant relics Before I proceed to describe the results of the excavations made it will be useful to cast a rapid glance at these *small objects collected from the surface* were it *only to see to what extent a* comparison of them with the objects excavated in different layers would bear out an *a priori* diagnosis as to the character of the mound

Finds on surface—That the mound marked a site of early occupation could be seen at once from a number of fragments of alabaster bowls and cups of which Sh T 26 (Pl XIV) is a specimen Similar evidence was afforded by a much used chert blade or scraper Sh T 27 (Pl XIV) By the side of a good deal of plain red pottery recalling Suktagen dor in fineness of body there could be picked up fragments of similar ware with geometrical patterns painted in black also in dark purple on a red or pink body Though executed more coarsely their motifs as the specimens (Sh T 1 8) reproduced in Pl XII show distinctly recall those found at the early Zhob sites and Suktagen dor But more numerous were pieces of painted grey ware showing similar patterns but executed for the most part with far bolder brushwork Among the specimens reproduced in Pl XII Sh T 11 13 are fragments from the rims of small bowls made with superior care both in body and design Sh T 14 16 seem to illustrate the rise of freer motifs including star shapes and circles while elsewhere hachuring within straight lined motifs and leaf shapes is the prevailing style of decoration *No potsherds with flat ribbing or other relief ornamentation* were to be seen on the surface of the mound and pieces of stoneware with grey or light green glaze were so few as to suggest merely occasional visits in quite

recent times On the other hand a relic of manifestly early times could be *recognized in a fragment of perforated plain* ware of just the same type as so frequent at Suktagen dor

Trench cut through mound—In order to gain definite information within a limited space of time as to the contents of the mound in the different layers composing it I decided to have a trench 16 feet wide carried from the eastern foot of the mound right through to its centre The detailed plan of *this trench in Pl 7 shows the several sections into which it was divided and* the section in the same Pl 7 the depth to which the excavation was carried in each of them From the section it is seen that in sections i to v the level of the surrounding ground was reached the maximum depth from the surface being 21 ft in v and not much less in iv and vi When the clearing in vii had disclosed the presence of a small burial ground on the top of the mound the trench was extended westwards for a distance of some 34 feet and widened by the sections xi xiv both to north and south Fig 29 shows the work in the trench while in progress from the east

Remains of walls—The remains noted in sections i iv made it clear that the mound had been formed from the start by the accumulation of debris of dwellings built probably for the most part with walls of rubble set in clay but in places also with rough stone walls Throughout loose stones obviously brought from neighbouring torrent beds for structural purposes were found embedded in the earth while in places the comparative solidity of the soil suggested remains of walls built with stamped clay or mud bricks It was however only between sections vii and viii both containing complete burials that remains of a wall built with sun dried bricks were distinctly determined and measurements of the latter obtained Remains of rough stone walls up to 2½ feet thick were struck in i and ii close to the surface of the slope Another wall found in iv from 4 to 7 feet below the surface is likely to have served as a foundation Different in character is the massive wall 6 feet thick and standing to a height of over 6 feet which was cleared between v and vi and which Fig 29 shows in course of excavation It seemed to continue towards SE and NW *and may well have belonged to a circumvallation* built before the mound attained its present height the top of the wall being found at about 7 feet from the surface of the slope

Pottery from sections ii v—Throughout sections ii v the objects unearthed were with one exception so uniform in character as to permit of their being described here together Nor was there any appreciable difference observed between successive strata as far as the pottery the most frequent of remains was concerned The great mass of the potsherds were plain reddish ware *of thick well levigated* clay very often showing a dark red slip on the surface On the fragments of painted ware of the same make the decoration throughout consists of simple geometrical patterns executed in black In ii 4 (Pl XII) and iii 5 (Pl XI) both found at a depth of 12 feet from the surface

See below p 97

we have neat parallel black bands below the rim also painted black of what evidently were large dishes In v 2 (Pl XII) and ii 7 (Pl XI) vertical parallel ripples descend from below the rim to horizontal bands above a second imperfectly preserved zone The fragment ii 5 (Pl XII) found at 12 feet from the surface and belonging to the mouth and shoulder of a large bowl or pot shows a pattern composed of hachured half leaves above and triglyphs below this has its close *pendants* among the motifs of the painted pottery found at the chalcolithic sites of Zhob [2] This piece is interesting also on account of its very fine slip dark red outside and terracotta within The boldly hachured motifs of v 3 (Pl XII) 4 5 (Pl XI) all three found at a depth of about 16 17 feet are similarly reminiscent of that early painted ware In v 3 as also in ii 2 v 2 (Pl XII) and on the outside of ii 4 the painted decoration is combined with waved or straight ridges gracefully applied in relief In ii 8 9 (Pl XI) similar relief ornaments are found without colouring on fragments of large vases The piece iii 2 (Pl XI) from a small bowl of fine ware shows outside a kind of stepped surface

Painted grey pottery —Compared with the red ware painted or plain the small number of grey pottery pieces from ii v is striking The thick walled bowl iii 3 (Pl XI) shows outside three narrow ridges in relief and appears to have had a scroll design painted inside below the rim almost completely effaced through prolonged use Motifs like those on the grey painted ware from the surface are found on the fragments ii 1 2 iii 1 (Pl XII) But more interesting are the two delicately worked bowls iii 6 and iv 1 Pl XIII both of very fine clay The narrow painted bands of Sigma shapes and contiguous lozenges on the latter vessel practically complete and the contiguous triangles in iii 6 have their almost exact counterparts among the motifs decorating fragments from the chalcolithic sites not only of Zhob but also of Sīstān [3]

Shapes of chalcolithic ware —Here reference may conveniently be made also to the few other vessels, all of reddish clay and with a single exception plain which came to light in these sections and show shapes still partly recognizable These shapes as the specimens reproduced in Pl XIII show all more or less resemble those of the small bowls and cups found at Periano ghundai The beaker iv 4 shows a simple geometrical pattern coarsely painted in brown The cup iv 3 of fine thin clay with its small low foot and bulbous shape recalls cups frequent at Periano ghundai [4] So do also the pieces iii 7 8, iv 2 By itself stands the fragment of a small vase of dark grey clay, (or stone ?) Sh T iii 9 it bears an incised geometrical pattern composed of motifs which are closely akin to those found on painted chalcolithic ware from Zhob and Sīstān sites

Terracotta figurines of bulls —Apart from pottery the most numerous finds made here were terracotta figurines of humped bulls of which no less than 85 were recovered all with a single exception in sections ii and iii As

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[2] Cf e g N Baluchistan Tour Pl VII P S W b 1 4

[3] Cf Innermost Asia iii Pl LXX LXXI N Baluchistan Tour Pl V P ? VI P ? XI MDLE 6 etc.

[4] See N Baluchistan Tour Pl VII P S W b 1 P C

the specimens reproduced in Pl. XIV show, their sizes range from 4 inches in length to miniature representations of only ¾ of an inch. Injured as most of them are, they yet often show naturalistic skill in rendering typical features of the Indian 'Brahmani' bull with its big curving hump and the ample dewlap hanging from below the neck. Two of the larger specimens, ii.17,19, are coarsely painted in black with stripes over the body and around the head. By the side of so many bulls it is of interest to note that only a single figurine of a cow, ii.13, was found, besides a very primitive representation of a nondescript animal, ii.12. With the single exception of the miniature figure ii.18, all the bull figurines were found about the centre line of the adjoining sections ii and iii, and on an average level of about 5 feet above that of the surrounding ground. As this level was reached also in iv, v and vi where no such collection of bull figurines was found the conclusion seems justified that their presence *en masse* in ii and iii was the result of intentional deposit.

Cult use of bull figurines.—It appears highly probable, that this had its reason in some motive of cult and the abundance in which exactly corresponding bull figurines were recovered under similar conditions at the Kolwa and Mashkai sites of Kulli and Mehi fully confirms this conclusion. It deserves, however, to be noted that of the figurines of an ornamented female, obviously meant for a goddess, of which specimens were found at the Zhob and Lōralai chalcolithic sites and in far greater numbers also at the Kolwa and Mashkai sites, not a single one turned up at Shāhi-tump. It seems probable that these little representations of a humped bull had served as votive offerings to some divinity representing the creative power in the world. Thus the similarity of the humped bull, the *vāhana* or emblem of Śiva, necessarily suggests itself. The similarity is striking enough to raise the question whether we may not have to recognize here the influence of an ancient cult established already in pre-Aryan India. But it is a question which only further discoveries and researches will perhaps in time permit us to answer.

Miscellaneous finds in ii–v.—Among other small objects of which specimens are seen in Pl. XIV there were numerous little stone blades found throughout ii–v at greatly varying depths, fragments of bangles of clay and shell, a stone ring iii.13, a small hone iii.14. Apart from some small fragments of copper the only metal object found was the well preserved ornament or stamp of copper, with a small shank on the back, ii.20 (Pl. XIV), showing a raised design. It closely resembles other copper ornaments of the same kind, possibly used as seals, which were recovered with the burials on the top of the mound. It was found in ii under 3 feet of earth and debris, but may perhaps belong to some later burial otherwise completely destroyed by erosion. The only human remains found were those of a badly crushed skeleton apparently in a crouching position which was unearthed in iv at a depth of about 4 feet. No funerary deposits were discovered with it, but in view of the observations made higher up on the mounds it seems probable that two fragmentary painted dishes found in iv stuck together but in pieces, were originally deposited near that body.



Fig 27 Sections VIII–X on Shahi-tump in course of excavation

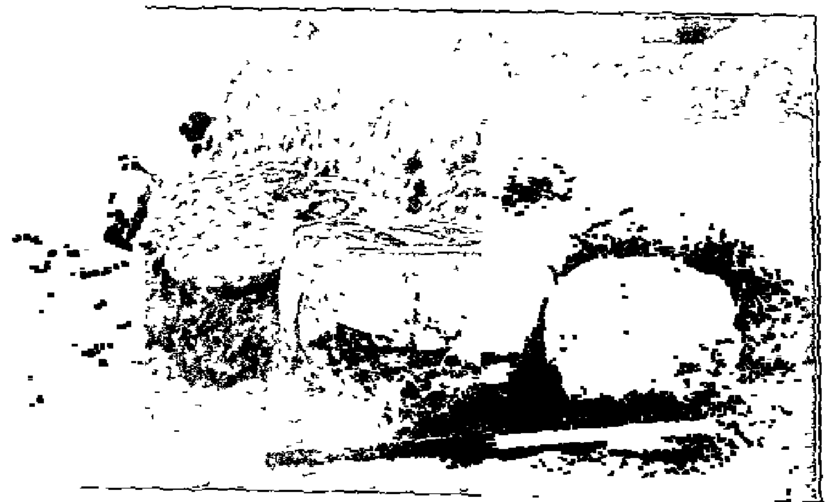


Fig 28 Nests of funerary bowls etc, in Section VII, Shahi-tump



Fig 29 Sections V–VII, Shahi-tump, in course of excavation

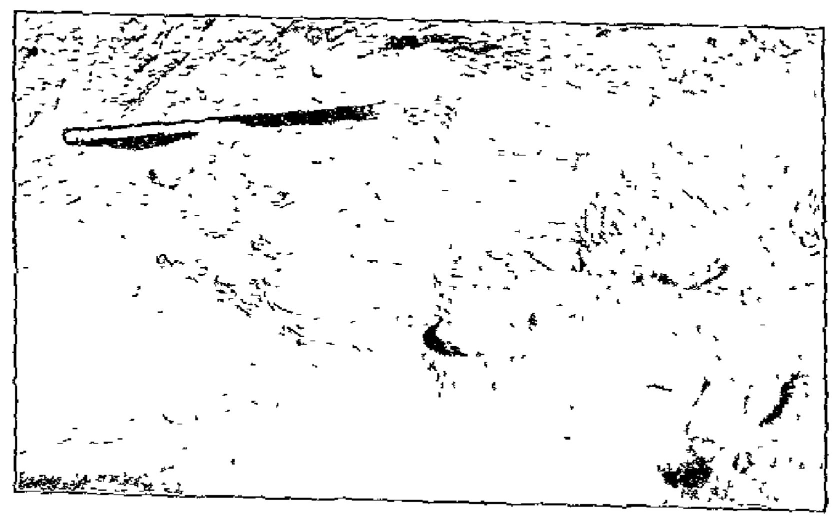


Fig 30 Funerary vessels in Section VII, Shahi-tump, in course of clearing

SECTION iii—BURIAL DEPOSITS ON SHĀHĪ TUMP

It was on approaching the top of the mound in section vi that the excavation first disclosed remains of a novel and very interesting nature A couple of feet from the south western corner and at a depth of about 5 feet from the surface there was laid bare a large painted urn vi 1 about 14 inches in diameter at its widest It was badly broken in its upper portion and crushed also below Within it were found fragments of bones all burnt including pieces of a sheep s or goat s jaw bone with teeth and of the spine mixed with ashes and earth There was also the fragment of a glass bangle By its side stood a triplet of small bowls joined like a cruet stand vi 3 (Pl XIII) and in a semicircle around it a series of small bowls cups and dishes most of them of thin grey ware and with coarsely painted patterns Two of the bowls had their mouths covered with a small painted grey cup in the one case with an alabaster cup (vi 6 a Pl XIII) in the other They evidently had contained some food or liquid In four instances two or three wide pots or bowls (vi 2 a c Pl XV XVIII 4 a Pl XVII 10 a Pl XV 11 a c) were found stuck one inside the other forming nests This arrangement proved quite common among the funerary deposits subsequently unearthed on the mound A flat dish vi 7 found much broken held animal bones vi 8 a large pot damaged was also full of such bones apparently burned while below it lay more bones of a sheep or goat

Decoration of painted pottery—Close by was found a large cup vi 12 of thin red ware closely resembling in its shape smaller vessels of this kind found in funeral deposits of Periano ghundai Its painted decoration also has its parallels there and among Sistan chalcolithic ware But the thinness of the body and the coarseness of the painting with colours often but imperfectly fired features which are common to this piece and to the prevalent grey ware, clearly indicate that this pottery was not intended for ordinary use It may be different in the case of some small jars of elegant shape (vi 3 a b Pl XIII) which show no decoration but are of stronger body and better finished That their shape has no parallel among the early chalcolithic pottery of the North Baluchistan sites or of Siktagen dor is a point which deserves to be noted The style of the decorative patterns will be more conveniently discussed after recording all the burial deposits which the clearing of the other sections vii xiv brought to light

Human body discovered—The true significance of the clusters of vessels was revealed when under a still more closely packed set of bowls and cups vi 14 about 3 feet to the south east of the first and on a slightly lower level there came to light poorly preserved remains of a human body with the legs bent at the knees and the hands jointly raised towards the chin The body lay with the head towards the west the feet had been injured during the removal of the vessels which were cleared close above and around them before the presence of the skeleton was realized Among the pieces found here was the small crucible shaped bowl vi 14 a (Pl XIII) raised on four high legs of which three remain it is obviously intended to imitate a cooking utensil

boards Sigmas, etc, familiar from the chalcolithic sites of Zhōb, Lōralai and Sīstān But in addition there are pieces like Pak 2,12,13, where the curving elements of design introduced are distinctly reminiscent of the style common on Nal pottery This relationship is supported by the fact that in pieces like Pal. 10,11 13 parts of the design are filled in solid with a second colour, in this case dark purple This additional colour was applied before firing as all the ware found here was obviously made for ordinary use Of the grey ware so common at Parōm and Shāhi tump only a few fragments were picked up, as also of an alabaster cup A few little pieces with dark blue glaze might suggest the possibility of occupation extended into or resumed in, historical times But judging from their rarity and the character of the masonry on the very top of the mound it is more likely that they belong to imports or date from occasional visits like a small fragment of China which was also picked up here The same may apply to the small fragment of a black glass bangle showing multicolour applique like the bangle fragment found at Suktagēn dor [3] The only find of metal is a needle like object of copper, Pak 14.4½″ long, showing some decoration round the middle

Judging from its size and its ceramic remains the Pak mound is likely to have been formed by prolonged occupation in prehistoric times I therefore regretted that the difficulty in securing labour in this neighbourhood and regard for the available time would not permit of trial excavation, such as might well repay a future explorer

Gate-dap mound.—From the solitary brackish well of Gate where we halted about 3 miles further on the road, I visited on the morning of February 29th the mound known as *Gate-dap* about 1 mile to SSE It lies amidst occasionally tilled fields close to the dry bed of the Gate kaur and takes its name from it The mound is about 25 ft high and measures, as the rough sketch plan in Pl 8 shows, about 120 yards in diameter At the south western end of its top it bears a modern enclosure with a kind of keep, said to have been built by the grandfather of the present owner of the neighbouring land The walls are built with stones taken from the debris of early structures on the mound and laid after the fashion now prevailing in Makran, slanting sideways to right and left in alternate rows Remains of old walls with well laid courses of flat stones like those of the Pak mound crop out at different levels The corner of such a wall was cleared from a 10 feet level on the south western slope to a depth of about 6 feet Above it on the slope lay a thick deposit of ashes and refuse, evidently recent

Painted pottery of Gate dap.—The *potsherds*, both plain and painted, which are found in plenty all over the slopes amidst the debris from stone walls, clearly prove occupation of the site during the same prehistoric period as at the Pak mound The painted ware agrees so closely with that of the latter in design, colouring and shape that reference to the specimens, G D I 8 shown in Pl XX, may suffice The resemblance to the painted pottery of Nal

[3] Cf above p 64

is striking here too. The fragment G.D. 1, which retains rim and bottom, would permit of the reconstruction of the whole open-mouthed jar. That occupation, however, may have continued here longer or been resumed is suggested by more frequent fragments of glazed ware, including two pieces in greenish grey and dark red which may be mediaeval; also by the fragment from the mouth of a pot, G.D. 16 (Pl. XX), coarsely painted in purple with a design which recalls those found on similar rough ware from certain later sites of Lōralai and Pishin.[1]

Mound of Segak.—From Gate-dap a ride of about 3½ miles to SSE. brought me to the large mound of Segak situated on the southern Kolwa route. For the most part the bare alluvial ground crossed was found to be laid out into fields with earth embankments to retain water from rain floods. But with the exception of one or two, none of the large plots had been tilled since Kolwa had received but poor rain that winter. For the last half-mile before Segak the ground was wholly uncultivated, a waste of drift sand and tamarisk scrub. Quite as desolate was also the appearance of the 'village' of Segak. Its half-dozen of dilapidated dwellings built with stones from decayed walls occupy the top of a large mound, the whole presenting a typical picture of the poverty and primitive conditions to be found in this 'granary' of Makran. The mound, as the sketch plan Pl. 8 shows, measures at its foot close on 800 yards in circumference and is occupied on the western and higher portion of its top by the remains of a small fort. Its completely decayed walls form an irregular pentagon about 60 yards long on the longest side. On the north this ruined circumvallation stands to a height of 39 feet from the foot of the mound. Outside it on the slope to the south an ancient well has been exposed by digging, apparently recent. At a depth of about 6 feet from the surface carefully built walls about 5 feet high can be seen lining a shaft circ. 6-7 feet square. In them courses of large roughly dressed slabs alternate with others of small flat stones. Potsherds strew the ground to the south for some 120 yards from the foot of the mound.

Painted pottery at Segak.—What little of painted potsherds was to be found on the slopes of the mound and beyond was all of the same type as at Pak and Gate-dap. Among the specimens, Seg. 1-6 reproduced in Pl. XX, a few with animal figures, including horned mountain sheep and the head of a bull, may be noted. The relief-decorated fragment, Seg. 5, seems to be part of a stand and of later date. It was curious to note that the modern occupants of the mound know no pottery whatever, having only skins for water and wooden vessels. The same is the case throughout Makran with the vast majority of the people. Local production of pottery appears to be unknown nowadays even in the larger places, except that of a most primitive porous ware for keeping dates in.

Rōdkān mound.—We camped that evening at Rōdhan about 4 miles to the north-east of Gat. Next morning I first visited its mound situated less

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[1] See N. Baluchistan Tour, pp. 57, 69; 1, 78, 67 et

than a mile south of the road It measures about 140 yards at its foot from east to west and some 80 yards across Its top which is about 25 feet high, had, as is the case with almost all ancient mounds of Kolwa, served as a place of safety in modern times The same had probably been the case earlier also since troubles had but rarely ceased in Makran after the Baluch occupation A modern wall built with stones from the debris covering the mound encloses an area of some 33 by 40 yards on the top Within it erosion had exposed the top courses of a well built ancient wall This was cleared during the day by the few men who could be collected in the neighbourhood to a depth of some 5 feet without reaching the foundation The masonry consisted of courses of large roughly dressed sandstone slabs up to 20"×12"×10" alternating with triple courses of small flat stones about 3" to 4" in height, all carefully set in mud plaster Towards the southern end this wall (Fig 39) showed a small opening, about 1 4 wide, which had its top closed by overlapping courses and apparently served as a window The painted potsherds found plentifully on the slopes mostly showed decoration of the Nāl type, as seen in the specimens Rud 1 2 (Pl XX), some blue glazed fragments point to later occupation The small fragment of a dark clay ornament is of interest on account of the delicately painted enamelled surface and deserves expert examination

Mound of 'Old Balōr'—From Rūdkan I proceeded to the south east in order to visit the mound known as Old Balōr and situated on the southern route The ride of some 6 miles led first past embanked fields abandoned for a long time and then across a bare expanse of clay with scattered tamarisk bushes marking approach to the western fringe of the barren Kap Finally crossing a belt of thick tamarisk growth amidst drift sand we found the mound It is about 20 feet high and about 80 yards in diameter at its foot The top is crowned with remains of ruined walls and towers evidently modern It also bears a small mosque with walls of sun dried bricks which wind-erosion is undercutting Potsherds mostly plain and of no ancient type lie thick on the slopes and around the foot of the mound The painted fragments do not show patterns of the Nal type, but mostly designs coarsely executed in black on red ground and bearing a late prehistoric look, as seen in the specimens Bal 2 3 (Pl XX) A comparatively late date of prehistoric occupation is suggested also by two terracotta relief fragments One, Bal 4 (Pl XX) apparently belonging to a lid, shows on either side of its top what may be taken for a ram's head with eyes and mouth marked by small holes, the other seems to represent the snout of a pig, almost natural size. A terracotta fragment of just the same shape but better preserved was found at the Spet-damb of Jhau There also the painted pottery indicates late prehistoric occupation [5]

Ashal mound—Finally we made our way back due north across a bare clay flat forming part of the 'Kap' and reached the mound of *Ashāl* close to the south of the road It measures some 90 yards in diameter and rises to a height of about 25 feet Here, too, a modern walled enclosure about 40 yards

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[5] See below p 135.

square crowns the top All the fragments of painted pottery found on the slopes and top showed patterns characteristic of the N l type as seen on the specimens Ash 1 5 (Pl XX) Among the unpainted ware which also was of early appearance there were some pieces of fine grey clay Of distinctly later pottery only one blue glazed fragment was found From here a drive of eleven miles brought us past the fields of Dandar to that night s camp near the mound and Ziarat of Madak Kalat

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SECTION ii —FROM MĀDAK KALĀT TO GUSHANAK

Mound of Madak Kalat —The top of the conspicuous large mound of Madak Kalat (Fig 33) some 55 feet high bears the ruins of a fort which in modern times had served as the stronghold of the Kandahi chiefs in their struggle against the Naushirwanis Continuous occupation seems to have overlaid here a pre historic mound with thick deposits of later periods down to modern times The crumbling walls and towers of the fort are built with undressed stones which are likely to have largely been taken from older structures But no early masonry remains such as found on the previously described mounds of Kolwa could be traced on the surface Most of the potsherds found on the slopes and the ground below are of plain coarse ware Among the painted ware only comparatively few pieces showed geometrical patterns of the early chalcolithic type executed in black over red ground The majority consisted of fragments of later pottery coarsely decorated with designs in brown or purple over a buff slip as seen in Mad 1 (Pl XX) Glazed pieces amongst them some with arabesque ornamentation manifestly mediaeval were frequent Late too are an iron arrow head and numerous fragments of coloured glass bangles picked up here

Sahar Kalat —*Sahar Kalat* which I visited next at a distance of about 4½ miles to the north east proved an isolated and steep rocky ridge occupied on its narrow crest by a small modern fort This was held until a couple of generations ago by the Kandahi chiefs The position is a strong one by nature and commands the caravan route from the harbour of Ormara to Panjgur which here enters the hills northward The scantiness of potsherds of any kind shows that occupation was limited here to times of trouble

Mound of Hor Kalat —Passing across stony flood beds of the Sahar Kaur and then through close jungle of old tamarisks with occasional clearings for cultivation we returned to the road. Following this for about 7½ miles eastward the flat-topped mound known as *Hor Kalat* was reached The roughly built enclosure and habitations on its top had been occupied in recent times by local Naushirwani landowners including Balōch Khan a chief leader in the rebellion of 1903 Owing to fresh trouble which the latest occupant had given the place was burned down four years ago under the Political Agent s order The mound measures at its foot some 120 yards from east to west and about half that across and rises to about 20 feet That it dates back to chalcolithic times was clearly proved by plentiful painted fragments of the Nal type which could be picked up on the slopes Among the specimens Hor 1 5 shown in

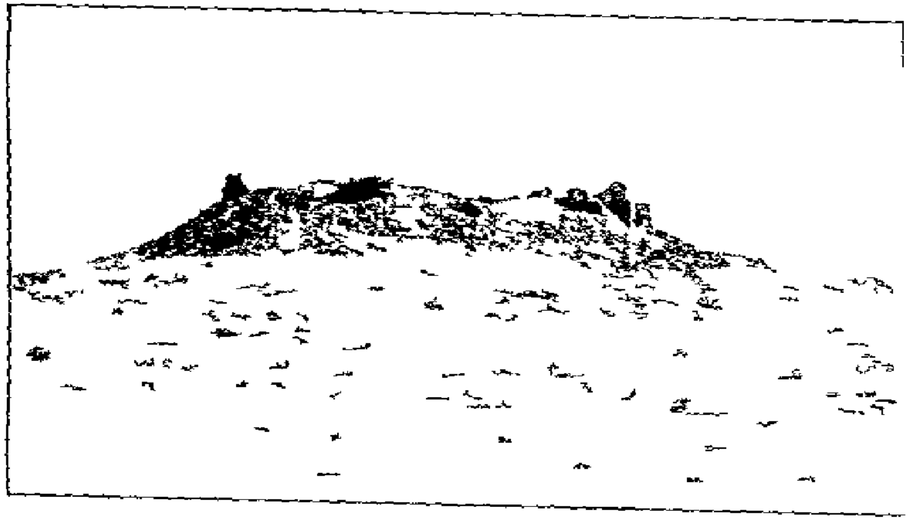
Pl XX two Hor 1 3 with figures of bulls claim some interest It deserves to be noted that on a number of fragments a dark purple colour is added to fill certain portions of the pattern otherwise executed in black No later painted ware could be found here

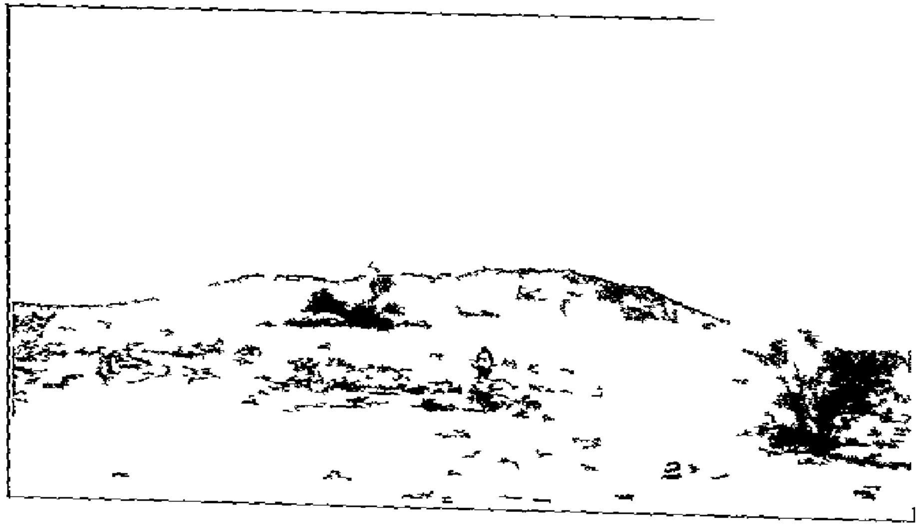
Mound of Jaren —It was different at *Jaren* a hamlet some 7 miles farther where a smaller mound about 60 yards in diameter was examined less than a mile to the south east of the road Here too the top of the mound at a height of about 25 feet bears a modern enclosure of rough stone walls The fairly plentiful debris of painted pottery found on the slopes includes fragments with patterns of the Nal style (Jar 1 Pl XX) as well as some black on red ware which may be older A later date may be ascribed to pieces of coarse body with designs roughly painted in dark pink or brown over a buff ground and perhaps also to some black on red pieces showing voluted scrolls (Jar 2 Pl XX) such as met with before at Zayak

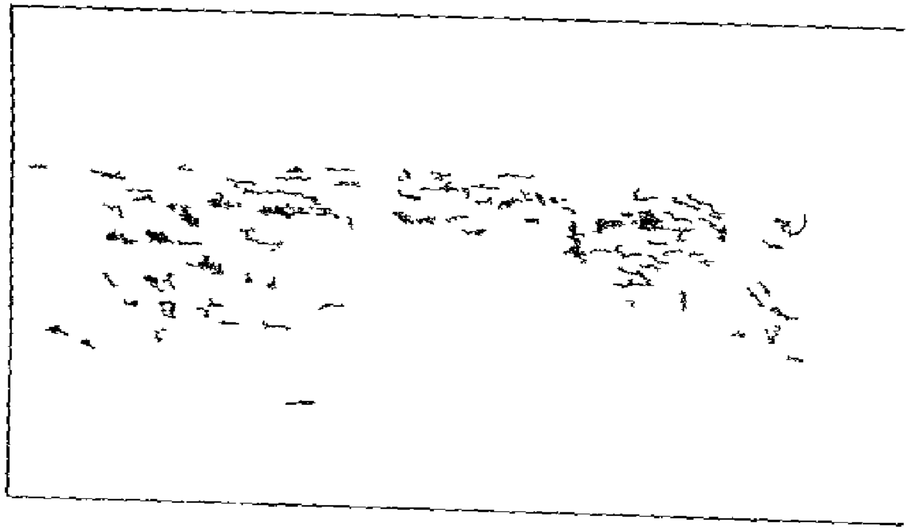
Zik mound —March 4th was a day of interesting survey work but made trying by a violent gale which following the short dust storms of the preceding few days blew with increasing strength until nightfall and then developed into a cutting Gurich The mound of *Zik* at which we camped 6 miles to the east of Jaren was the largest so far seen in Kolwa As shown by the rough sketch plan (Pl 8) it stretches for about 300 yards from NE to SW and measures where widest close on 200 yards Its height about 20 feet along the eastern portion rises to about 30 feet towards the west There rough stone walls built with materials evidently from earlier structures enclose an area measuring within about 30 by 46 yards Inside this are to be seen ruined quarters constructed with mud bricks They stand on a terrace (Fig 36) raised with large roughly dressed slabs of stone which have been taken from ancient walls and show sizes up to 2½ feet in length Lines of such walls crop out on the surface at different points of the slopes Zik kalat is known to have been tenanted by Jadgal Mirwari and Naushirwani families who successively fought over and held the land in the neighbouring part of Kolwa

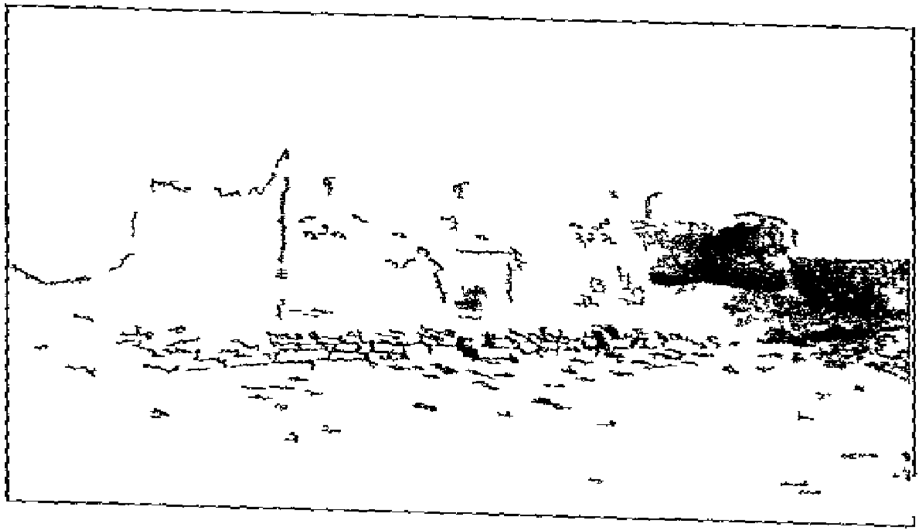
Polychrome painted pottery —Plentiful painted pottery (for specimens, see Zik 1 11 Pl XXI) found all over the mound proves that the occupation of the site goes back to the chalcolithic period Most of it exhibits characteristic features of the Nal type In the imbricated pattern of Zik 1 in the design with a bull Zik 6 in Zik 7 showing part of a fish also in Zik 8 the use of a dark purple in addition to black outlines over buff ground renders the decoration polychrome Some pieces like Zik 2 and Zik 9 from a large thick vessel of which other fragments were found may represent an earlier type The leaves on Zik 5 recall a motif frequent on the painted pottery of Dabar kot[1] Links with the deeper layers of Shahi tump are furnished by two fragmentary bull figurines (see Zik 11) and a few pieces of fine plain grey ware No glazed ware was found on the surface except two potsherds both of which look modern Remains of ancient stone walls in the shape of lines of massive masonry cropping out on

[1] *Cf* *Baluchistan Tour* P XIV XV There is seen also in D 50 D W in 14 30 an ornamentation similar to that of Z 1 9









the surface, could be traced at more than one place of the slopes, especially towards the east. The impression conveyed by these remains and the great size of the mound was that Zik kalat marked the position of an important prehistoric settlement. It would deserve prolonged investigation thereafter.

March towards Malar.—In the vicinity of Zik there starts a low and much decayed chain of rocky ridges striking from south-west to north-east across the watershed which divides the drainageless portion of Kolwa from the one draining towards the Mashkai river. To the south of this chain lies the Marrah depression liable to inundation and affording fair grazing; the road skirts it by keeping to the southern foot of the hills. No mounds were known to Nub Taj Muhammad on this side nearer than Gushanak. So I decided to let the camp proceed by the road to the latter, while I myself turned to the north-east towards Malar, an area with scattered cultivation near which mounds as well as 'Gabar bands' were reported.[1] These were the first of which information had reached me since entering Makran, and this fact, together with the abundance of such old embankments in Jhalawan which we were now approaching, made me specially eager to examine them.

'Gabar bands' near Malar.—We came upon these first two 'Gabar bands' after a ride of close on 7 miles up a wide scrub-covered valley crossed by numerous drainage beds. The 'Gabar bands' descend from the northern foot of the above-mentioned low hill chain at a point about 1½ miles to the NE. of the height marked with 2,428 feet on the map. They consist of dams rising to about 4 feet above the ground and faced westwards with a massive wall of large rough stones; behind this a sloping bank of earth and gravel adjoins on the east. The first *band* was clearly traceable for about 40 yards from where it starts in continuation of a low rocky ridge running from south to north. The second dam of just the same construction and bearing was found about 300 yards further to the east and could be followed for some 100 yards. Both 'bands' end abruptly above a shallow trough in which drainage from the plateau collects on its course towards Zik. Between the two 'bands' extends a fairly level area of clay overlaid by thin gravelly detritus but showing also some low banks of bare clay curiously like miniature 'Yardangs' in the Taklamakan or Lop desert. Here and there scattered pieces of very coarse pottery looking as if hand-made could be picked up within the enclosed area. No trace could be found of any transverse dam such as could have served to retain and bank up rain water descending the slope from south to north. Nor were such transverse dams as might be needed to form cultivation terraces found between the 'Gabar bands' met further north.

Purpose of 'Gabar bands'.—There can be no doubt whatsoever that these dams and other similar ones subsequently passed near the southern slopes of the same hill chain were constructed with a view to facilitating cultivation. Where transverse embankments in conjunction with such 'bands' follow the

[1] A mound was said to exist at Chambur, a village on the southern Kolwa route, and like that of Segak to be occupied by habitations. As the distance to it from our Zik camp was over 8 miles I could not spare time to visit it.

line of the slope as is the case at various Gabar bands of Mashkai to be described below the purpose of securing adequate watering for the terraces thus formed is quite clear Where such transverse dams are absent as here it appears to me highly probable that the object of the builders was to control the drainage descending the slopes to assure its uniform distribution over the lower ground and to prevent its being prematurely lost in deep cut flood channels In other localities to be mentioned further on Gabar bands were constructed with the unmistakable object of forming reservoirs where water would be stored in order to irrigate the land lower down during dry periods of the year Elsewhere Gabar bands may have been intended to promote the deposition of fine detritus on rocky soil thereby rendering otherwise barren ground fit for cultivation as has been rightly suggested by Mr Hughes Buller in an instructive note dealing with some of the Gabar bands of Jhalawan [8]

Study of Gabar bands —The subject is a very interesting one from both the antiquarian and geographical points of view It deserves to be systematically investigated if posssible with the assistance of a competent irrigation engineer and on the basis of adequate meteorological data concerning the local rainfall No such special study could be attempted in the course of my tour I shall therefore have to restrict myself here to the record of what I was able actually to observe at the different Gabar bands met on my routes leaving the study of the interesting general questions raised to some competent enquirer of the future

Small circular mound —Within about 8 feet of the point where the track to Malar passes the westernmost of these 'Gabar bands there stands a small circular mound about 9 feet in diameter and about 5 feet high built with rough stones outside and enclosing a core of earth Large stones lie on its top At first the little structure suggested a burial cairn but it looked too well preserved to suggest great antiquity and certainly no other similar structures could be found anywhere near Nor did I come across them at other Gabar bands though told of their existence elsewhere Popular belief I was told takes them to mark places where criminals were buried alive There was neither time nor labour available to open this little structure But one exactly similar found by the side of the road from Khozdar to Wadh and searched proved to hold nothing but earth and rubble Possibly these small mounds may have marked boundaries as was stated by my informants at Wadh

Turning from here to the north we met half a mile further on three more dams of the same type all running east to west and ending by the bank of a drainage bed which descends from the rugged hill range to the north These dams stood to a somewhat greater height and were separated from each other by distances of from about 100 to 120 yards The earth ramps of the second and third dams face north and south respectively

Kallag mound —About two miles to the north of this point beyond a wide belt of flood beds there rises the mound known as *Kallag* from a hamlet once situated near it It occupies a natural terrace of detritus between two

[8] *Cf Jhalawan Gazetteer* 190 p. 58 and Mr Hughes Buller's paper Gabar bands in Baluchistan there quoted from *Report of the Archaeological Survey of India* 1904 5 pp 193 201

beds which meet close to the west of it and measures some 150 yards along its southern foot On the north side its top stands to a height of about 40 feet with terrace like portions extending on a level of 25 30 feet to the east and south On the western portion of the top the remains of massively built stone walls can be traced Masonry with regular courses of large roughly dressed slabs crops out on the surface for about 50 yards on the south and 40 yards on the west the corner between the two lines being clearly discernible By the side of plentiful plain pottery mostly of a coarse kind but little of painted potsherds could be found on the surface and those only of small size Among them patterns both of the simpler geometrical type familiar from the chalcolithic sites of North Baluchistan and of the Nal type can be recognized One fragment shows the peculiar mat-marking in relief on the outside which, as far as my observations in Baluchistan go is to be found only at the earliest of chalcolithic sites But obviously a mound of this height is likely to mark a site of very prolonged occupation No indication was found of such occupation having extended into historical times

Mound of Cheri Malar—A ride of close on three miles eastwards across a desolate waste brought us to Cheri Malar one of the three small hamlets counted as belonging to Malar This area of scattered cultivation lies on the flat watershed between the basin of Kolwa proper and the tract draining towards the Mashkai river the map showing for the central hamlet of Malar a height of 2 241 feet The mound known as *Kamar band* is situated about half a mile to the east of Cheri Malar and measures at its foot about 110 yards from east to west and roughly half that across where widest It rises very gently to a height of 20 feet on the top At the south eastern foot of the mound remains of a wall 4 feet thick built with large rough slabs of sandstone could be traced on the surface for 16 yards another wall crops out a little higher on the slope above Here, too the plentiful potsherds found on the slopes were almost all of plain coarse ware and the few painted fragments showed only simple bands But as on two pieces an additional colour a dark purple is used besides black as frequently on pottery of the Nal type occupation down to later chalcolithic times may be assumed

Chalu damb mound—A second and more extensive mound lies half a mile further to the east amidst fields it is known as *Chal damb* or else as the mound of Dil Murad from the collection of wretched palm mat huts which are found on its top Its foot on the east measures some 120 yards on the south about 160 yards Though only 15 feet or so high the mound is of interest, as it bears in several places remains of walls of considerable length and solidity On the northern side of the top a wall 7½ feet thick can be traced for 35 yards on the surface The rough slabs composing it measure up to 3 × 1 9″ × 9″. Foundations of a massive square structure rise near the north eastern end of this wall At the other end of the wall too structural remains with walls 4 feet thick are exposed Here the roughly dressed slabs show sizes up to 3 by 1½ feet. The few painted potsherds which could be found here exhibit only very simple geometrical designs A small fragment of fine grey ware showing a painted

scroll in black deserves notice and so also a piece of good red ware with parallel sharp-edged ridges such as were found on pottery from the lower strata of Shahi tump Both point to occupation from an early period Judging from the similarity of the surface finds at the Kallag and Malar mounds there can be little doubt about their marking sites inhabited simultaneously Their size and close vicinity clearly indicate that the Malar area with its expanse of potentially fertile alluvial soil maintained a comparatively dense population at that early period

Remains of Singi kalāt —A site very different in character was revealed when after following for 2½ miles a deep cut flood bed which drains the Malar plateau to the south-east we arrived at *Singi kalat* the stone castle Not far from the point where this bed cuts into the low hill chain which as already mentioned stretches south of the plateau, there is found a remarkable natural fastness As the sketch plan in Pl 8 shows it is formed by two precipitous ridges of bare rock which meet on the north east at a narrow neck and thence descend like the two sides of an isosceles triangle to the left bank of the deep cut flood bed The two ridges one facing approximately north, the other south east fall away outside their crests with vertical and in places overhanging cliffs of sandstone steep detritus slopes below these run down into narrow eroded gorges On the inside the two ridges dip at an angle of over 30° into a small trough The lower end of the base of the triangle is closed by a ruined wall of some 140 yards in length It is built along a rocky ledge to which an alluvial terrace slopes up gently from the left bank of the torrent bed this is here close on 60 yards wide The ridges attain their greatest height near the apex of the triangle and here a neck some 125 feet above the torrent bed was defended by another and much shorter wall This owing to the steepness of the slopes on both sides has badly decayed The walls are built with large undressed slabs of sandstone quarried here on the spot, as were perhaps also the stones used in the construction of the massive walls at the Malar mounds

Ruins within fastness —The crest and inner slope of the northern ridge are covered with the ruined walls of single roomed dwellings built with rough slabs up to 3 feet or so in length and over 1 foot high In one of these ruins the walls still stand to a height of 5 feet No clay or mortar is found between the slabs but small flat chips of stone were used roughly to fill interstices and equalize courses On the inside of the south eastern ridge too there are remains of ruined dwellings clinging to the slope just like those I found on the even steeper slopes of 'Raja Gira s castle' above Udegram in Swat Within the wall at the base of the triangle there is found a well about 5 feet in diameter now filled with debris but still showing stone lining at its mouth

Where the foot of the northern ridge descends towards the junction of the gorge with the flood bed the natural line of defence provided by its cliffs is continued by a wall This is decayed on the slope but below where it flanks the alluvial terrace it is remarkably massive and well preserved for a length of 52 feet (Fig 33) It stands there to a height of 12' feet above the present bottom of the Nullah and is no less than 13 feet thick Its western end is protected by a kind of semi circular bastion which projects 6 feet beyond the outer face of the

wall and measures 10 feet in diameter The ground level is here likely to have been considerably raised by alluvium The great thickness of this wall as well as the special strengthening provided at its end are probably to be accounted for by the fact that the wall here was intended not merely to guard approach to the alluvial ground below the base of the hill fastness but also to protect it from erosion by floods

Purpose of hill fastness —From the natural strength of the position of Singi-kalat its distance from arable ground and the close occupation of the interior by ruined dwellings it may be safely concluded that the fastness was meant to afford safety to a large number of people during times of trouble Only systematic clearing could show how far back the construction of the defences and dwellings dates Among the painted pottery fragments of which a fair quantity was picked up notwithstanding the trouble caused by the sand storm blowing at the time, some pieces with geometrical patterns in black on red ground look early *chalcolithic* *The majority with roughly* executed designs in pink or purple over buff ground seem to belong to late prehistoric ware It is curious to observe that a few of the latter pieces show on the inside the impression of textile materials obviously from the surface of moulds

'Gabar bands' south of hill chain —A ride of some two miles due south through much eroded hills took us across the hill chain to the motor track skirting the foot of the latter On passing along this for about 2½ miles north eastwards to where the camp had been placed by the side of a water hole, I noticed a succession of half a dozen of 'Gabar bands' all descending at right angles to the strike of the hill chain They could only have served to control the drainage and to distribute it uniformly over the alluvium of the glacis This is no longer cultivable now as the uncontrolled drainage gathers in numerous deep cut Nullahs which unite in a still deeper flood bed This carries the water away towards the Mashkai river without affording a chance for its use on the glacis

Rocky hill of Gushanak —The storm blowing all day developed during the night into a violent cutting Gurich which nearly brought our tents down The bitter cold of the morning following after the heat of the weeks spent in the Kej valley and Kolwa made one realize the trying nature of the Makran climate Marching about 3 miles SSW across fields left untilled owing to the year's deficient rainfall I visited that morning *Gushanak* one of the chief villages of Kolwa It is situated on the southern caravan route and counts some fifty permanently occupied huts It lies at the foot of a steep conical hill which is about 150 feet high and conspicuous in its complete isolation The rocky slopes of the hill make access to the small plateau on the top distinctly difficult on the north side they are altogether impracticable The top must have at all periods provided a very strong defensive position, and the fortified quarters built there by the great uncle of the present Mirwari Sirdar of Gushanak and now in ruin prove that it served as a place of safety down to recent times The walls comprise masonry both of undressed stones set in mud and of sun dried bricks

Painted pottery on Gushanak hill—No ancient structural remains could be traced But plentiful fragments of painted pottery, found on the top as well as on the slopes of the hill prove occupation since prehistoric times As seen from the specimens reproduced in Pl XXII, different types of painted design are represented among them Simple geometrical motifs black on red as in Gush 3,6, are rarer than those more elaborate ones of Gush.1,2 executed in brown on buff ground The small fragment Gush 4 of superior fabric stands by itself showing a horse with rider, a subject not otherwise known to me among chalcolithic or later ware Decoration of the Nal type, in polychrome execution, is found only on two fragments In Gush 5 the pattern is painted in a brownish purple over a light terracotta slip The broad band of purple above shows a very fine polish which is found elsewhere also on one or two pieces from this site

SECTION iii—THE MOUND OF KULLI

After regaining our camping place we proceeded by the road to the mound reported near the cultivated plots of Kulli For a mile or so we passed along the foot of the last outlier of the low hill chain crossed the day before from Malar and there I noticed decayed 'Gabar bands' descending over the fertile alluvial slope Between a few of them low transverse dams could be made out obviously intended to hold up the drainage for watering terraced fields

Position of Kulli mound—After about three miles the road brought us opposite to the mound of Kulli It is just in continuation of the line in which that chain of hillocks trends away to the south west This position combined with the size and appearance of the mound might at first sight have caused doubt as to the artificial origin of the mound, so closely is its surface throughout covered with stones and what could easily be mistaken for mere detritus Yet closer inspection soon showed lines of walls cropping out in numerous places all over the mound and on different levels This together with the plentiful potsherds strewing the slopes made it certain that it was accumulation of debris which accounted for the height and extent of the mound With a length of close on 400 yards from north to south and a maximum width of some 330 yards the *Kulli damb* rising to 30 feet in height, is by far the largest of all the Kolwa mounds The abundant use made of stone building material all of which must have been brought from a distance—none of it is obtainable anywhere nearer than two miles—also pointed to a site of importance perhaps the chief prehistoric settlement of Kolwa The comparative vicinity of Gushanak held out hope of securing local labour without too great delay So after a preliminary examination of the site I decided to spare time here for some test excavations

Configuration of mound—The Kulli mound (Fig 37) as the sketch plan Pl 9 shows is except at its southern extremity closely adjoined by cultivation This is likely to have raised the ground level around the mound by the deposit

of alluvium and thus to have covered up traces of early occupation beyond its present foot This is proved by the survival of a small area with remains of walls, potsherds and debris at a distance of some 120 yards beyond the north western foot of the mound (see sketch plan Pl 9) It has remained untilled for some reason and is separated by an earth embankment from the adjacent fields which lie on a higher level The northern portion of the mound which is the higher one rising to a height of 30 feet, bears on its plateau like top a decayed quadrangular enclosure measuring about 60 by 50 yards It is built with stones of small size and in its extant height 4 5 feet shows nowhere such careful masonry with regular courses as the ancient walls brought to light by excavation That it is a small fortification of later though not of modern date can scarcely be doubted Outside it wall lines of ancient structures are exposed at numerous points on this high portion of the mound In the sketch plan, Pl 9 only those were marked which could be fixed by the plane table A large crater like depression found outside the northern face of the enclosure probably marks the position of an ancient well a smaller and perhaps more recent well is found at the south eastern foot of the mound

Later burial cairns—Evidence that the mound had in its northern portion assumed its present appearance already in pre Muhammadan times is supplied by the presence of some small cairns in the shape of stone circles to be found in at least two groups outside the enclosure They were burial cairns of the same type as first seen at Moghul ghundai Gatti etc On opening four of them at the point marked III on the sketch plan we found within the circles loose earth and, mixed with this small fragments of calcined bones some ashes and pieces of plain pottery These cairns were on the same level as the remains of walls marking small ruined structures within a few yards of them On clearing these it was found that these wall remains rose only 1 or 1½ feet above the roughly flagged floor of small rooms one measuring 6 feet square with a little recess by its entrance The higher portions of the walls must have completely crumbled away before the burial deposits were made This complete decay is explained by the very friable nature of the shaly stone material in the walls and by the debris lying exposed to erosion on the top of the mound

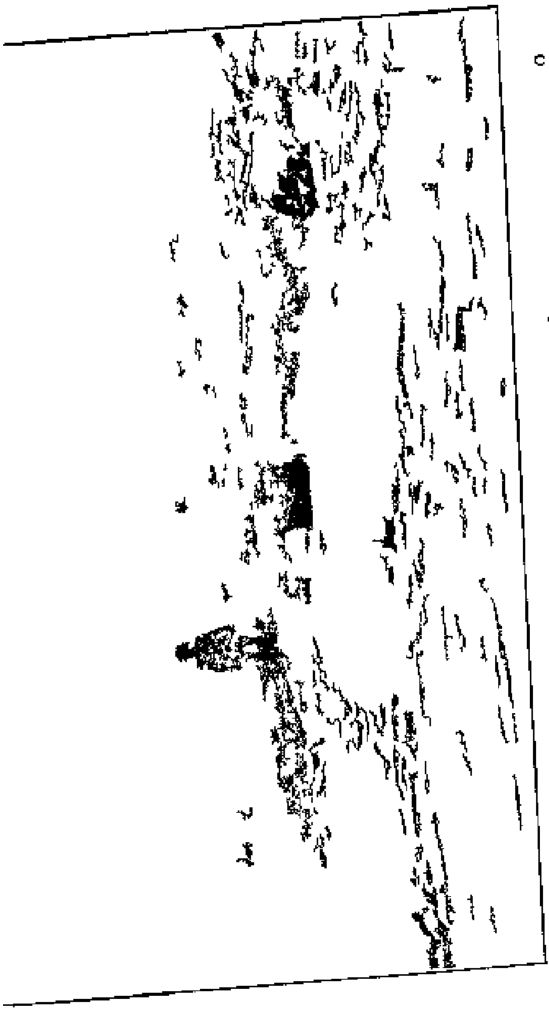
Southern portion of mound—The southern and lower portion of the mound is covered at elevations from 15 to 25 feet with low heaps of stone debris from decayed structures Lines of walls built with regular courses of roughly dressed slabs emerge on the surface in numerous places Where these lines of walls are sufficiently clear to be measured and indicate the presence of buildings of some size, they have been specially marked to scale in the sketch plan Where the debris obscures the outlines of the structures underneath the latter are marked only by symbols Surrounded by these hillocks of debris there lies a shallow depression in the centre of the southern portion of the mound It probably marks a locality within the site which for some reason remained more or less clear of buildings The drainage collecting in this depression after rainfall accounts for the presence there of some old trees and of scrub The same is observed within the enclosure on the northern portion of the mound

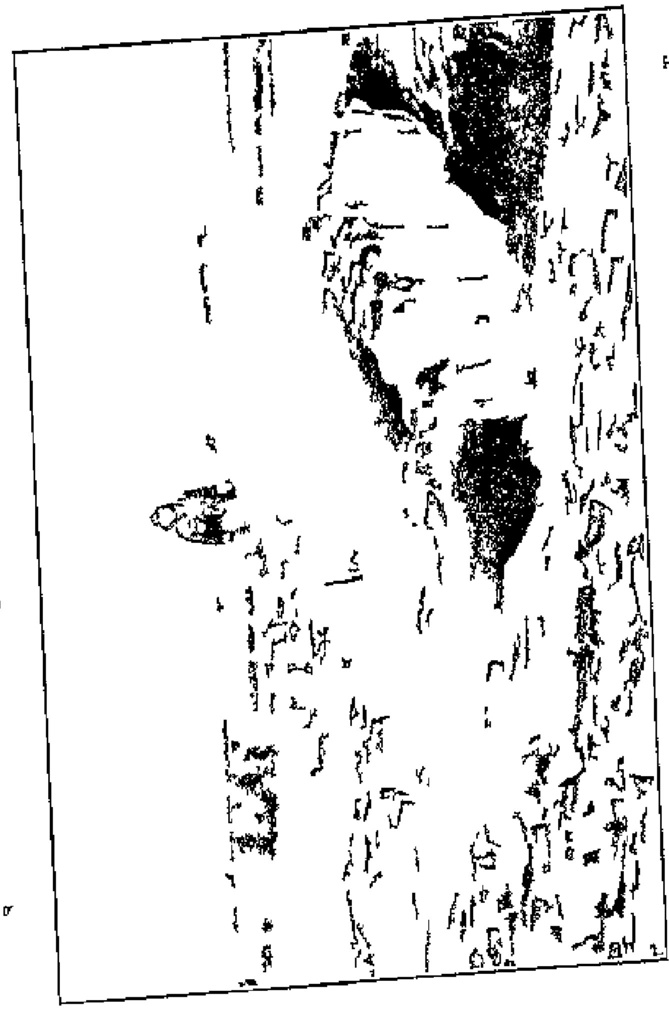
Abundance of painted potsherds on surface—Potsherds, plain and painted strew the slopes throughout but are particularly plentiful on low terraces below those little hillocks where structural remains are exposed The greater ease with which denudation proceeds on ground clear of ruined structures may explain this or else those terraces may have once been occupied by ancient rubbish heaps The painted potsherds picked up on the surface bear mostly a very early look their simple geometrical patterns often recalling chalcolithic ware of Zhob and Sistan Designs executed in black over red ground greatly prevail but others in brown pink or purple over buff are found also The specimens Kul 1 13 reproduced in Pl XXI XXII XXIII illustrate the most characteristic types of decoration Among the motifs may be specially noted rows of adjoining heart shapes (Kul 5) triglyphs divided by Sigmas (11) fringed bands (12) vandykes solid or hachured (6) Of animal figures there are found rows of large horned mountain sheep (4) the well drawn hind part of a bull (13) Pieces decorated with sharp parallel ridges (3) were found also in the lower strata of Shahi tump and at Kolwa sites previously described The fragment from the bottom of a large dish (1) shows a stamped wave pattern of elegant design

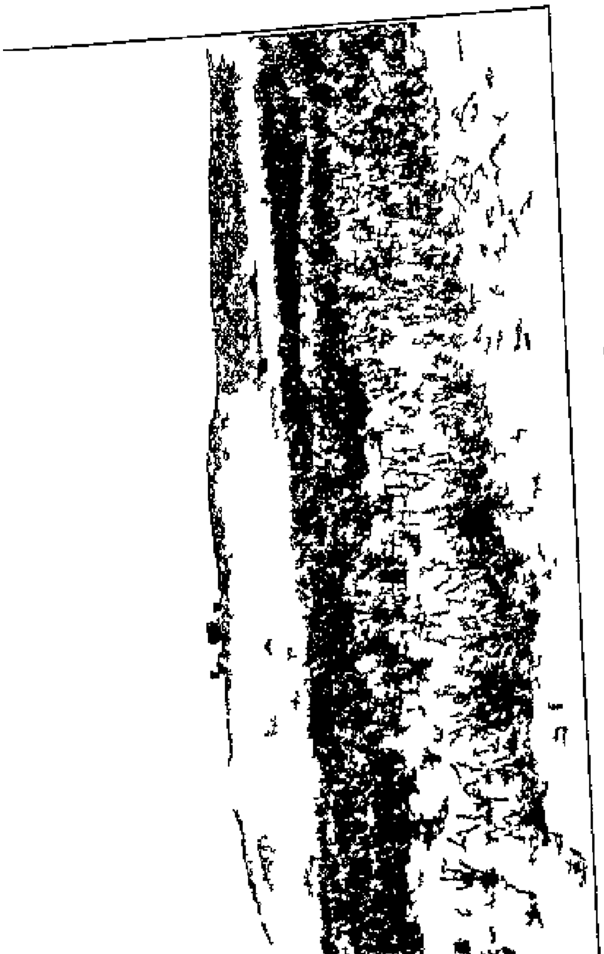
Terracotta figurines on surface—The links which these first finds of decorated ceramic ware from the surface suggested were fully confirmed by a number of terracotta figurines also collected there Fragments of humped bulls, plain or painted, of which Kul 14 (Pl XXII) is a specimen closely correspond to those so plentifully found low down at Shahi tump In the roughly executed female bust Kul 15 (Pl XXII) it is easy to recognize a representation of the figure of the goddess already familiar from the chalcolithic sites of Zhob and Loralai as well as in a superior form from Mohenjodaro

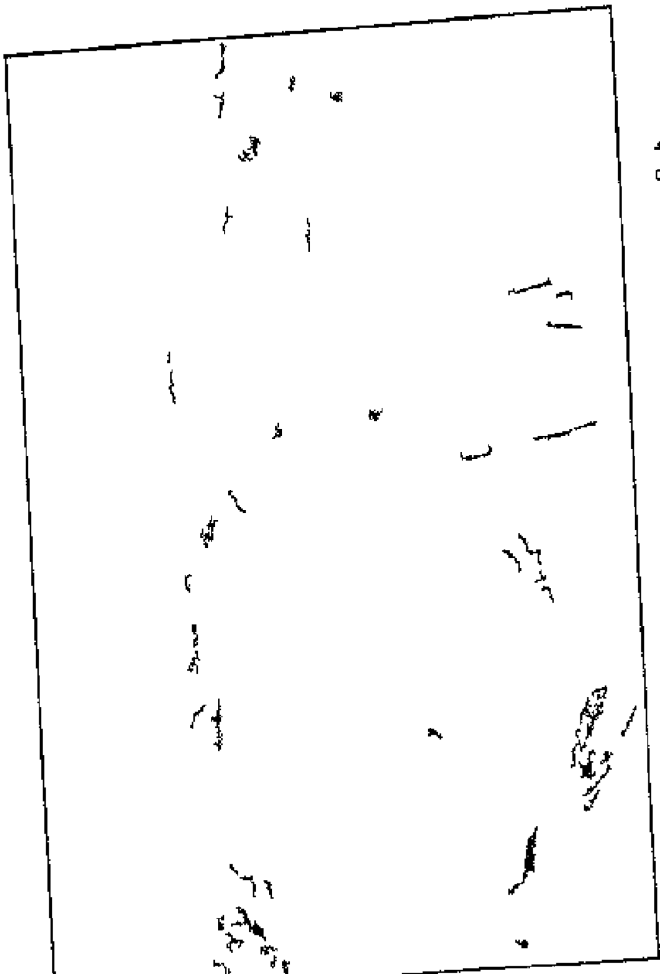
Trial excavations started—Over night arrangements were made to collect labourers and by the morning of March 5th it became possible to start trial excavations with the help of a small contingent of men and boys mainly brought from Gushanal by the local Mirwari landowner In the course of our work at the site which extended up to March 11th this number gradually increased to a little over a hundred of course without being accompanied by a corresponding increase of efficiency the men of Kolwa being known for their general slackness The remains I selected for the first clearing were those of a small isolated structure of which the walls forming a rectangle could be traced on the surface on the south eastern side of the mound at a level of about 15 feet Its position is marked with I in the sketch plan Fig 38 shows the ruin after partial excavation as seen from the north

Walls of structure I—Trenches dug along all the four sides laid bare the outside walls of a building measuring 31 3" on its longer sides approximately facing north and south and 19 6" on the shorter ones These walls 2 feet thick are built with regular courses of roughly dressed slabs The height of the courses varies as shown by the diagram in Pl 9 which reproduces the masonry in a portion of the east wall Here and also in the outer face of the south wall one course set about 1½ feet from the ground is composed of slabs of a harder stone, apparently sandstone 1 4 high whereas the material used









throughout the walls elsewhere is shale This has invariably weathered badly and the decay of this friable stone as well as of the mud plaster thickly used between the courses accounts mainly for the composition of the mound In clearing the trenches along the outside walls of the structure it was found that the debris outside their faces consisted for the most part of pieces of shale varying from small flakes to large slabs which had fallen from the superstructure

Finds in trenches outside walls—Before proceeding to describe the observations and finds made within the small building, I may conveniently record what the preceding clearing of the trenches along the outside walls brought to light These trenches around the east south and west wall struck a flooring composed of large roughly fitted flags of shale and about 4 feet wide As shown by the section on the line C D (Pl 9), this flooring or pavement lies on a level about 1½ feet below that of the floor level found within the rooms but only approximately determined On the west side the enclosing wall was found to rise 7 feet above the level of this pavement On the east the wall survived only to a height of 4½ feet no doubt owing to increased exposure on the declivity of the slope Along the north side we found no pavement but as seen from the ground plan of I, a series of walls of varying thickness separating small rooms and recesses in i and ii

Later walls added—That these dividing walls starting from the northern face of the building are later additions and of different date is proved by their starting on varying levels Evidently they were built on to the structure after debris had begun to accumulate around it Their masonry is of the same type as in the walls of I but they rest in each case on debris from fallen portions of the wall behind The two walls jutting out between i and ii are placed at a slight angle against the north wall of I The purpose of the small space *a* enclosed by them and of the still smaller one *c* at the north eastern corner is uncertain The thought suggests itself that they may have served for storing grain like similar walled recesses found in ruins of Buddhist times in the Peshawar and Swat valleys Some support to this suggestion is afforded by a hollow grinding stone, of the type seen in Figs 41, 42, which was found in the recess *a* From the recess communicating with *b* two steps formed by large flag stones lead up to what appears to have been a cross wall on a higher level

Body buried to south—Later additions to the building were traced also at its south western corner There was found a thin wall continuing the south wall from a level well above the pavement, and a rough recess formed by three large undressed slabs placed against that wall at a level of 4 feet above the pavement Two lay at right angles to the wall at a distance of a foot from each other and a third across their ends The purpose of the rough recess thus formed could not be determined The burial of a body found opposite to the SW corner at a distance of about 3 feet and at a depth of 4 feet from the present surface level must have taken place when debris had already accumulated to a considerable height around the building The head which was badly damaged while the trench was being cut lay approximately towards the north The knees were drawn up and the arms bent towards the head

Potsherds excavated outside I.—From the debris cleared by the excavation of the trenches a great quantity of potsherds both plain and painted was recovered Judging from the place in which they were found it is safe to assume that most if not all of these fragments belonged to vessels actually in use while the building was occupied The close agreement in fabric and decoration with the pottery from the interior of the building fully confirms this Another relevant observation is that there is no difference in either ware or decorative style between the ceramic materials at whatever depth they were found in the several sections i vi This clearly points to prolonged use of the same types of pottery The abundant plain ware has mostly a strong body of well levigated reddish or light terracotta clay Only a single fragment of dark grey ware was found while in the subsequently cut trench Kul V such ware was frequently met with There were numerous perforated pieces and others showing relief decoration with sharp-ridged ribbing as seen in Figs 41, 42 and common in the deeper layers of Shahi tump

Painted pottery—A striking feature of the pottery remains here brought to light is the great abundance and uniformly superior quality of the painted fragments Their patterns are always executed in black over a light terracotta or buff ground But in addition a dark red colour is often introduced in horizontal bands separating different zones of decoration As the specimens reproduced in Pl XXI show the motifs used are of a very varied character By the side of simple geometrical motifs including hachured vandykes leafshapes simple or 'feathered' festoons etc (Kul I i 2,4 7, ii 1 iii 1 iv 1, v 1) there are found often combined with them stylized representations of plants and animals In I i 3 iii 2, iv 2 we recognize conventionally treated trees, while by the short horizontally placed zigzags which appear by the side, above or below animal figures (I i 2 6, iv 4, vi 1) grass or scrub seems to be symbolized Among animal figures the most frequent are rows of large horned beasts shown in movement and probably representing mountain sheep or ibex (I i 2,6, iv 3 4) In I vi 7 we may have a bull, with elongated head as seen on the complete jar I viii 1 (see below) The strange big horned creature (I i 6) with curved legs might possibly be mistaken for a large insect did its disproportionately small head not show a resemblance to that of the bull in I viii 1

Decorative motifs and shapes—There is much in the style of this painted pottery as far as the geometrical motifs are concerned to recall the decoration of chalcolithic ware from the North Baluchistan sites and Sistan But the introduction of plant and animal forms and of an additional colour constitute a marked distinction The same holds good as regards the funeral painted ware of Shahi tump Very curious is the total absence of those curving and interlacing motifs which are characteristic of the painted ornamentation of the Nal type Yet we find a distinct approach to the latter in the shape of the jars found more or less complete in the rooms vii, viii and also that suggested by the straight-walled fragment I iii 2 On the other hand the very small bases of fragmentary cups such as I v 3, vii 1 are distinctly reminiscent of the shapes common at the Zhōb sites and also at Suktagen dor

Terracotta figurines and miscellaneous objects.—Among ceramic finds there remain still to be mentioned six terracotta figurines of bulls exactly resembling those from Shahi tump and those brought to light in great number from the trench Kul V Other small objects found in I i vi are a copper awl (?) I i 8 a with loop Pl XXII a bone needle some beads of stone including lapis lazuli a couple of fragments of bone bangles Among a few small glass fragments it is interesting to find three pieces of glass bangles showing coloured decoration in relief or inlay Like similar fragmentary bangles found at Suktagen dor and Shahi tump they are manifestly imports from a far more advanced region Here their antiquity is attested by the depth at which they were found

Finds in room I vii—The trenches along the outside walls of the building had nowhere shown an entrance So excavation had to be started from above Walls dividing the interior into rooms could be traced on the surface The first of these to be cleared was I vii occupying the south western corner (Fig 40) Here two large pots measuring respectively 22 and 24 inches in height and 22 and 18 inches in diameter where widest were found in the NE corner at about 3 feet below the surface They evidently had been placed there to hold water On about the same level there lay two more vessels of coarse plain ware

A foot or so lower down there turned up the large piece of a vessel decorated with wave lines in relief shown in Fig 41 On a level of about 5 feet from the surface two painted jars were recovered I vii 4 5 (Pl XLIII) One, I vii 4, with slightly concave sides is decorated below the shoulder with a row of large horned mountain sheep while the broad zone lower down shows two nondescript animals in movement as if stalking between branching trees The painted surface has somewhat suffered by abrasion The same is the case with the other I vii 5 the motif of hachured triangles alternately below and above a horizontal line and of hachured half ovals in the empty spaces between is one found also on the Shahi tump funerary ware On a level about 3 inches below these jars there was struck a thick layer composed of small stones in which no potsherds or other objects were found and which hence may be taken for the original rough flooring of this room Its bottom lay about 1½ feet above the level marked by the pavement outside As the walls show no opening any where it is certain that this like the other cellar like apartments must have been entered from above probably by means of a wooden ladder Remains of charred timber were found about a foot above the assumed floor and a small projecting ledge on the western wall at about the same height

Objects found in room I viii—The room I viii adjoining eastwards yielded a series of interesting finds A large flat dish of strong red ware painted on the inside with a bold pattern of contiguous discs was found broken into many pieces at about 4 feet from the surface also part of another large vessel decorated with raised wave lines (Fig 42) A massive trough shaped grinding stone 1 9" long 1 4" wide and 11" high from the flat bottom and a flat stone roller 1 3" by 1 6" and 1½" thick shown in the same figure illustrate a method of grinding corn which Naib Taj Muhammad believed was still in use on the Oman coast At a depth of 5½ feet and about 2 feet from the east wall there

lay on the top a large broken bowl and close to it a high perforated jar, also broken, I viii 3 (Pl XXV, also seen in Fig 42), and two small painted jars, I viii 1 2 (Pl XXIII, XXV), both damaged in antiquity One, I.viii 1, 5 high, shows on its slightly concave side two humped bulls in spirited movement separated by stylized trees The decoration is painted in brown over a light buff ground The other I viii 2, originally about 4" high, is made of fine grey clay over which the decoration is painted in dark brown This has over most parts badly faded through damp Its wall shows below a row of large horned animals (Ibex ?) and above a band of balusters

Find of bead necklace —Within this jar there were discovered under a layer of ashes and charred wood twenty seven elongated carefully made beads, measuring up to one inch in length, twenty one are of pinkish or white agate and the rest of a black stone It is evident that they all formed part of a necklace which was hidden here on purpose amidst kitchen utensils left behind as useless All round the wide bowl or cauldron above which these jars lay the earth was reddened by fire right up to the wall A couple of broken figurines of bulls was also found in this room, and one in vii A flooring made of large unhewn slabs lay on a level about a foot above the outside pavement

Rooms I ix, x —The clearing of the remaining portion of the interior showed that the room viii communicated in the NW corner with the one adjoining on the north and marked x, by a passage, 3 feet wide This passage was blocked by heavy debris of stones, as was the case also with the room x. The dividing wall was leaning over at an angle towards the passage The room x was cleared to the floor level without any finds being made The north western part of the interior proved to contain two small apartments a thin wall dividing ix *a* from ix *b* The latter, measuring 7′ 6″ by 5 10, was found empty In the other ix *a*, two stone built platforms 2′ 3″ wide and standing 2½ feet above the floor, line the north and south walls From the northern one a stone step leads down to the narrow space left on the floor, the platform itself being approached by two very narrow steps from above it in the north western corner Their position suggests that the floor of the upper storey which the building no doubt, once comprised stood approximately at a level of 7 feet above the floor of the lower one Apart from a coarsely made jar 1′ 3″ high and 10″ in diameter at the bottom which stood near the west wall at the foot of the southern platform, the only object found was the fine grinder of reddish marble, I ix 1 (Pl XXIII) which also lay near the wall on the same platform It is 8″ high and 4 in diameter at its foot Its shape and smooth surface attest superior workmanship

Arrangement of structure I —*The ruin I as now* described, provides some observations of a general interest The accommodation offered by it conveys some idea as to the conditions in which the better class of the people settled in Kolwa at the time were living The close agreement in type between the painted pottery left behind in the house by its last inhabitants with that found in deep layers outside it and on the surface of the mound adds to the chronological value of the indicia derived from the presence of similar painted ware



FIG. 41. FRAGMENTS OF DECORATED POTS, ALSO GRINDING STONES, EXCAVATED IN DWELLING I, KULLI MOUND.

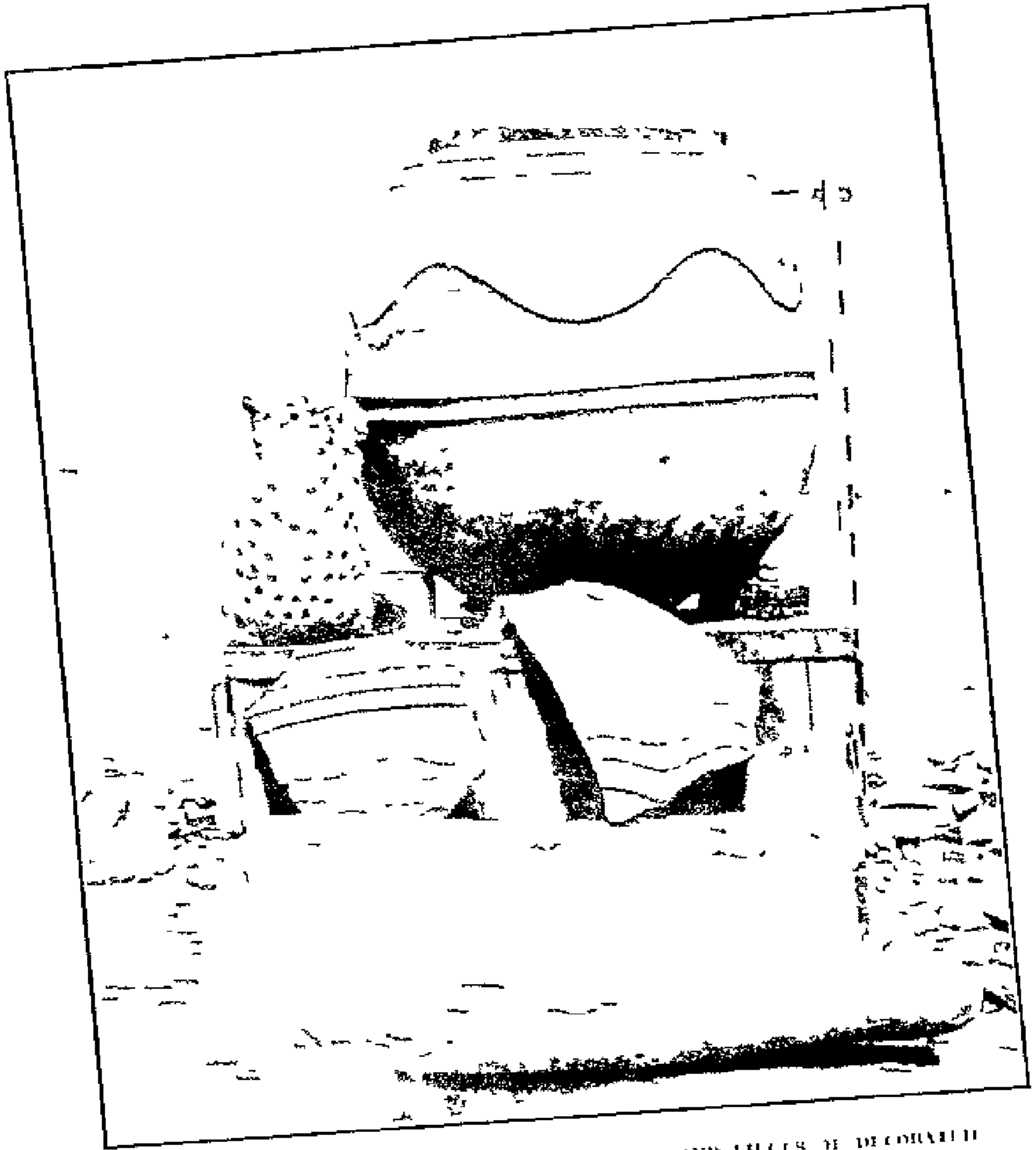


FIG. 42. LARGE JAR, N. 1, GRINDING STONES AND PIECES OF DECORATED POTTERY FROM DWELLING I, [illegible] KULLI MOUND.

elsewhere It obviously prevailed during a prolonged period The absence of any entrance to the lower floor of the house suggests conditions when special regard had to be paid to safety Probably the dwelling was entered by a door in the upper floor approached by a ladder which could be easily removed in case of necessity An exactly corresponding arrangement is seen in many of the dwellings at ruined sites of the Peshawar and Swat valleys dating from the Buddhist period Finally the way in which that necklace from I vii was hidden seems to indicate that the last inhabitants left the dwelling at a time of some sudden emergency which is likely to have affected the whole site

Trenches II IV—A shallow trench carried along the wall of a badly decayed structure Kul II a little to the north of I and on slightly higher ground yielded only small pieces of painted pottery and some broken bull figurines A clay spindle whorl found here II 1 is shown in Pl XXII In another experimental trench Kul IV which was dug on the eastern side of the mound on a low level without striking structural remains the pottery both plain and painted proved of the same type as at I for a specimen see IV 1 Pl XXII Besides a small copper fragment and much broken bull figurines there was found here a piece of a bangle made of very dark glass and ornamented with fine relief spirals in different colours

Pottery finds in Trench V—More profitable and interesting proved the cutting of trench V made on the north eastern slope of the mound when towards the latter end of my stay the available labour had increased It was carried in nine sections each about 8 feet wide and 12 feet long from a level of 10 feet to that of the small plateau occupied by the quadrangular enclosure of later date Throughout these sections and at all the depths reached potsherds both plain and painted were found in abundance Among the plain pottery there are numerous fragments of cups showing the small bases characteristic of chalcolithic ware of this kind found at the Zhob sites and Sutkagen dor (see V iii 2 vi 7 vii 5 a Pl XXIII) The painted pieces in make patterns and colouring show so close an agreement with the painted ware found at ruin I that reference to the selected specimens reproduced in Pl XXII and XXIII may suffice (Kul V iii 1 v 1 3 vi 1 3 vii 1 2 ix 1 3) It will be seen that in some of these the brush work approaches in fineness that shown by many of the patterns on the chalcolithic pottery of Sur jangal[1] The dark red slip found in V vii 2 as well as in several other pieces and the triangles touching each other in V v 1 3 vi 1 as in Sistan chalcolithic patterns may be specially noted so also the Egyptian lotus motif in Kul V ix 3 It is of interest also that in the highest section ix a fair number of fragments of fine grey ware unpainted were found most of them small open bowls like V ix 5

Figurines of bulls and goddess—A striking result of the excavation effected at V was the abundance of terracotta figurines brought to light especially in the lowest sections A total of 66 figurines of humped bulls out of these 31 in the first section at the lower end of the trench and 14 in the

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[1] See N Baluchistan Tour Pl XX XI

second were counted Specimens of them damaged like practically all others are seen in Pl XXIII The frequency and the type of these bull figurines constitutes a close link between the Kulli site and the early strata of Shahi tump But of still greater interest perhaps is the fact that there came to light here also five small terracotta figurines of the goddess of which rare specimens had been found at the chalcolithic sites of Periano ghundai Kaudani and Dabar kot[2] Three of them V i 2 (Pl XXII) vi 4 a vii 1 are badly broken but V vii 3 (Pl XXII) is practically intact except for the tip of the nose right down to the waist below which it ends as do all these figurines from the previously named sites What imparts particular interest to this representation is the suckling babe shown here at the breasts of the figure This strikingly confirms the view previously advanced that these figurines represent a divinity of fertility the mother goddess of many ancient Eastern cults The treatment of the face almost bird like with the eyes set sideways, is distinctly archaic even more so perhaps than at the Zhob sites On the other hand the treatment of the hair is a little less primitive In the lowest section i there lay the fine jar 20 inches high and decorated with bold relief bands seen in Fig 42 It had lost part of its wall in antiquity Of other objects found in V only a curved piece of very thin gold plate, from section ix, calls for special mention it is about an inch long and shows traces of ornamentation on the edge

Clearing of apartment V x—In following up a wall which had been laid bare by the side of the trench in section viii and ix we came upon remains of quarters on the edge of the level ground above Here an apartment V x measuring 13 by 12 feet was cleared a projecting wall 2 6" thick divided it into two parts of slightly different width as seen in the sketch Pl 9 This and the outer walls still standing to heights from 4 to 5 feet showed everywhere solid masonry of roughly dressed slabs 3 7 high except on the eastern side There this stone masonry reaches only to about 1 foot from the floor then follows a solid layer 2 feet high of debris mixed with what looked like burnt plaster and above this again some thin courses of inferior masonry This layer of solidified rubble extends further eastwards into section ix It hence has occurred to me as the most likely explanation that the structure to which the apartment x belonged had at one time been destroyed by fire The east wall had fallen and when the structure was restored the layer of debris which the conflagration had hardened was allowed to remain and was built over Marks of fire were visible all along the inside of the walls of the apartment up to about 2 feet from the floor remains of white plaster still adhering in places It deserves to be noted that the entrance to this apartment lay at a corner just as the passage between I vii and I x Evidently the builders were not equal to constructing walls sufficiently strong to be pierced by openings anywhere but at a corner I regret that want of time did not allow the excavation at V to be continued further on the plateau

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[2] See *N Bal* ... *Tour* Pl IX XII XVI

Absence of stone implements and Nal type pottery.—Concerning the site as a whole two observations remain to be noted which, though negative, deserve attention. The first is the curious fact that neither on the surface nor in the course of excavation did we find a single stone implement. This may be due either to chance or to the character of the soil being here composed mainly of stone débris and not permitting small stone 'blades,' etc., to be recognized as readily as at other chalcolithic sites where it consists of clay. The second observation relates to the total absence among the hundreds of painted potsherds at the Kulli mound of a single fragment showing the peculiarities of decorative pattern, colouring or shape of the 'Nal type' pottery. On the other hand I have had already occasion to point out the distinct links between the ceramic remains of Kulli and those from the lower strata of Shahi-tump as well as those from the undoubtedly early chalcolithic sites of Zhob and Loralai. At *Shahi-tump pottery of the Nal type was found only on the top of the mound* amidst the burial deposits which obviously belong to times much later than those during which the site was occupied by the living. I am hence led to assume, tentatively for the present, that the Kulli site was abandoned before the ceramic style of Nal came into use. The fact that potsherds of the latter type could be picked up again and again at most of the smaller Kolwa mounds helps to strengthen this chronological inference based on the complete absence of Nal ware at Kulli.

Full evidence regarding the conclusions just indicated can be hoped for only from extensive and systematic excavations at the Kulli mound. They would claim labours extending over months, if not seasons, and a much larger number of diggers than could be gathered locally at short notice. The site is certainly the largest known to me in Makran and in view of what it has yielded on a first rapid reconnaissance, it is likely to reward with valuable results any future archæological explorer commanding adequate time and resources.

CHAPTER VIII. ANCIENT REMAINS BETWEEN KOLWA AND JHAU

SECTION i.—RUINED MOUNDS OF BAZDAD AND AWARAN

The open valley trough which stretches from the flat watershed west of Kulli down to Awaran is for administrative purposes included in Kolwa and thus reckoned as belonging to Makran. But its drainage flows into the Mashkai river, the westernmost feeder of the Hingol; and as the valley of the Mashkai river with the exception of the comparatively small area occupied by the villages of Awaran geographically as well as politically forms part of Jhalawan, the account of the sites surveyed down to Awaran may conveniently be included in this chapter.

Mound of Bazdād Kalat.—The first of those sites, known as *Bazdad Kalat*, is situated about 8 miles to the north-west of the Kulli mound and was

visited by me on March 9th from the latter The route led across an open and potentially fertile plain cultivated only in patches with the help of flood water from the branching beds of the Wahali kaur which descends from the Central Makran Range in the north west This drainage might even now suffice for more cultivation than is carried on here very indifferently by tenants of the Brahui Bizanjau Sirdar of Nal This is proved by the many groups of large jungle trees passed between the scattered fields and the thick scrub which has overrun the latter in places

The mound of Bazdad kalat rises to a height of about 25 feet and is occupied on its top by a ruined fort built with sun dried bricks which was held by the Bizanjau chiefs since about the beginning of the 19th century and abandoned towards its last quarter The mound measures at its foot about 110 yards from east to west and circ 90 yards across Ancient pottery debris lies plentifully on its slopes Among the painted pieces collected those of early type decorated as at Kulli with geometrical patterns or more rarely with plant and animal forms (see the specimens Baz 1 5, Pl XXIV) are the great majority The patterns are painted in black on a dark terracotta ground or red slip But several fragments exhibit decorative motifs characteristic of the Nal type (see Baz 6 8) white and red colours easily effaced having been used to fill the black outlined designs It may be concluded from this that the occupation of this site continued longer than that of the Kulli mound Of pottery of historical times not a single fragment was found

Tract of Āwaran —On March 12th I moved my camp some 18 miles down to the rest-house of Āwaran situated on the left bank of the Mashkai river at an elevation of about 1 750 feet where the direct overland line of the Indo European telegraph running from Karachi to Panjgur and Kirman passes Below this point known as Rekin the Mashkai river enters a succession of narrow tortuous gorges These continue down to its junction in the south with the Nal river the main feeder of the Hingol and nowhere leave room for cultivation To the north conditions are different There from a point about 1½ miles above the rest house the course of the Mashkai river which holds water in places throughout the year lies in an open valley This measures about 6 miles from north to south and some 4 miles across where widest Parts of this area are tilled by a group of small villages collectively known as Āwaran and counting some 1 100 people largely semi nomadic Cultivation is carried on with the help of the flood water which is brought down after rainfall in the hills by the Mashkai river and by the Dorashki kaur a tributary of it from the north west The meeting of the two rivers appears to have given its name to Āwaran

Mound of Āwaran Niābat —That the area of Āwaran has been occupied by settlements of *some* size from early times is proved by the series of mounds I was able to examine in the course of a long day's ride on March 13th made in the company of the local Brahui landowners The numerous retainers they brought with them proved helpful in searching the sites visited for ceramic and other remains The first and most conspicuous of the mounds is the one

which rises not far from the left bank of the main Mashkai river bed at the central hamlet of Awaran where the modest headquarters of the Kolwa Niabat are placed The mound about 30 feet high is crowned by the fairly extensive and well preserved ruins of a fort This is said to have been destroyed some forty years ago when the local Mirwari chiefs retook it from the Bizanjau Sirdar of Nal The high walls of the fort are built below with water worn stones from the river bed and above with mud bricks The mound itself occupies the north eastern end of a natural ridge about 20 feet high which gradually falls away towards the south west The debris accumulations from dwellings built with rubble and mud extend along the foot of the ridge for about 250 yards from NE to SW and some 170 yards across where it is widest The easier slope of the mound towards the south western end of the ridge seems to have been occupied down to late times and there near a small Muhammadan cemetery walls crop out amidst the debris

Pottery of Āwaran mound.—Judging from the plentiful painted pottery found all over the mound the site favoured by its position appears to have been occupied during prolonged prehistoric periods down to later times As the specimens seen in Pl XXIV show there are found numerous fragments with simple geometrical patterns painted in black over dark red ground with or without slip as at the Kulli mound (Aw 1 3) There are also frequent pieces showing decoration of the Nal type (Aw 4 7) in which besides black outlines additional colours usually a light cream and deep carmine are used over the buff or terracotta ground In a fair number of pieces of superior make (Aw 8 12) the decorative motifs are neatly painted in reddish brown over a light terracotta slip or whole bands of the same colour applied in a manner almost suggesting polish A few fragments of red ware show rows of curving hooks (Aw 13) as often seen at sites of northern Makran like Zayak and Besīma Some glazed fragments prove occupation down probably to mediæval times

Kambar damb—Proceeding due north across the cultivated area of Labach hamlet which is served by flood channels of the Doraski and Mashkai the site of *Kambar-damb* was reached near the foot-hills dividing the two rivers There a long stretched narrow ridge running parallel to a western branch of the Mashkai is thickly covered with large water worn stones and ancient pottery debris for a total distance of some 380 yards The ridge in its lower strata consists of an alluvial clay deposit over which a thick layer of boulders has been spread by water action Owing to its isolation the ridge offers a naturally strong defensive position and the big blocks of stone ready at hand have been used to provide its southern extremity which rises to about 50 feet in height with a rough and now badly decayed circumvallation This extends for about 60 yards along the top of the ridge and measures about as much across where widest Beyond the wall which separates this little fortification from the northern portion of the ridge the latter stretches on a lower level some 270 yards farther Its flat terrace like top here less encumbered with boulders and about 90 yards wide is like the fortified portion of the ridge covered with plentiful potsherds marking ancient occupation

Painted pottery at Kambar damb—Among the numerous painted pieces the most frequent show geometrical patterns in black on red ground They are rather more coarsely and freely executed than at Kulli (see Kamb 1 3 *Pl* XXV, Kamb 5 8 Pl XXIV) and combined with voluted scrolls (Kamb 1 7) which are not to be found there In addition there were picked up a few fragments Kamb 9 11 Pl XXIV with motifs neatly executed in dark brown over light terracotta in the manner noted above at the Awaran mound On the whole the occupation of Kambar damb appears to date somewhat *later than that of the* Kulli mound but not to come down so far as the period of the Nal type ware neither of this nor of any later pottery did we find fragments

Firoz Khan damb—From here we proceeded to the north east crossed the Mashkai river near to the point where a temporary *band* serves to distribute *its flood water into rough inundation canals and after* about 2½ miles reached the conspicuous mound which is known as *Firoz Khan damb* after the chief who last held the ruined fort crowning its top All round it there spreads a desolate waste of bare clay cut up into a maze of little furrows and terraces by shallow flood channels descending from the steeply eroded hill chain to the north west This ground not unlike a Yardang area in the Lop desert bears a thin layer of plain potsherds on the surface for about two furlongs from the foot of the mound The mound which is perfectly isolated rises to a maximum height of about 50 feet As it is manifestly throughout of artificial origin the stones on its slopes most of them waterworn but not as large as on the Kambar damb ridge must belong to the debris of decayed structures The mound measures about 320 yards from east to west along its northern foot and some 110 yards across where widest On the terrace like southern portion of the mound which has a height of about 25 feet remains of walls roughly built with stones and mud can be traced

Remains within ruined fort—The fort which occupies the highest portion of the mound measures about 40 yards from SE to NW Its rough circum vallation is built with stones set slanting to right and left *in alternate rows* The much decayed state of this enclosure bears out the local report of its having been abandoned some six generations ago The mound right up to the top crowned by this ruined fort is composed of ancient debris This apart from the painted pottery found there is proved also by *a curious discovery In* a fissure which erosion has produced in the soil within the enclosure there could be seen remains of old walls built with regular courses of flat stones and evidently belonging to the corner of a square structure From the debris exposed by their side a large pot of thick coarse ware measuring 12 in diameter and 9" high was extracted Its vertical walls right up to the slightly inverted lips round *the* mouth, 10" wide are perforated exactly *in the* same manner as in the vessels of this kind found at Sul-tagen dor Shahi tump and elsewhere The plentiful ashes and remains of charcoal found within conclusively showed that such vessels must have served as braziers or *for cooking*

Most of the painted potsherds found on the mound belong as the specimens Fir 1 4 (Pl XXV) and Fir 5 6 (Pl XXIV) *show* to the same boldly patterned

ware as prevails at Kambar damb But here too there were a few pieces of superior make with reddish brown design over light terracotta as seen on Fir 6 (Pl XXIV) None of the fine red and black ware so common at Kulli was picked up nor a single fragment decorated in the Nāl style On the other hand renewed, though probably not prolonged occupation in historical times is attested by glazed pottery fragments some of old look some mediæval These were particularly frequent on a low portion of the mound towards the south

Pottery of Sohren damb—The small site known as *Sohren damb* the red mound which was reached about a mile to the east offered an observation that helps to strengthen reliance on the chronological indications afforded by pottery materials from the surface of sites Here at Sohren damb we found a flat patch of ground about 120 yards across thickly covered with potsherds Among these glazed fragments of mediæval look, with a great variety of designs chiefly in different shades of brown green and yellow (for specimens see Soh 1 7 Pl XXIV) were abundant while unglazed painted ware was conspicuously absent The glazed pottery comprises two kinds, both represented among the glazed Persian ware which was found on my third Central Asian journey at a site near Sarbisha above the Sistan basin According to Mr R L Hobson Keeper of Ceramics British Museum who has described these latter finds the type with green glaze and incised ornament, like Soh 7, recalls Persian pottery of the ninth to tenth centuries while the other type (Soh 1 6), here dressed with a light yellowish slip and decorated in brown black and green resembles the Samarland pottery of the twelfth to fourteenth centuries[1] The plain piece with incised ornament Soh 8, obviously co eval also claims some interest Beads little pieces of gold and other metals were said to be occasionally found at this ground after rain Not far from it to the south there start scattered patches of cultivation belonging to the hamlet of Pīrandar

Kambaro damb of Bedi—The last site of Āwaran visited occupies a winding clay ridge rising above the hamlet of Bedi about 2 miles to the north east of Awaran proper It is known as *Kambaro damb* and extends for about 380 yards This ridge rises at its eastern end to a height of about 45 feet and for the most part appears to consist of natural deposits Its top and slopes are thickly covered with potsherds and stones The painted pieces collected were not numerous and showed all coarse patterns of the same type as found at the site of Kambar damb above Labach Fragments roughly incised with comb drawn lines were frequent also a few pieces of red and dark grey ware with sharp-edged ribbing were found As glazed ware was totally absent the site would appear to have been abandoned since prehistoric times

Larger population in prehistoric times—The number and comparatively large size of the mounds found in the limited area within which the character of the ground about Awaran is ever likely to have permitted of cultivation deserves attention all the more because with the single exception of Sohren-damb their ceramic remains clearly point to their having been occupied during approximately

[1] See Mr Hobson s Notes on Ceramic Specimens in Appendix D *Innermost Asia* i p 1015 also Pl CXVII

the same prehistoric periods From this the conclusion may safely be drawn that the area then supported a much larger population than could possibly maintain itself there now Considering the position of Awaran local agricultural resources can alone come into account here These again are necessarily dependent in the main on climatic conditions affecting the available supply of water Hence here as in the case of Kolwa archaeological evidence clearly points to a change of climatic conditions in the direction of 'desiccation' having taken place since prehistoric times We shall see below that the observations made in the Jhalawan valleys adjoining to the east closely agree with this inference

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SECTION ii—THE SITES OF NŪNDARA AND JHAU

Information suggesting the existence of prehistoric sites in the Jhalawan hills to the south east of Mashkai had been first received by me from Mr Gabler Superintendent of the Indo European Telegraph Department On our meeting at Gwadar he had mentioned having noticed two mounds close to the telegraph line where it crosses the valley of Jhau on its way from Las Bela to Awaran He subsequently very kindly arranged for specimens of potsherds from these to be transmitted to me through the guards along the telegraph line, and these duly reached me while still at work near Turbat These specimens large enough but all plain could furnish no definite clue to the age of the site I could not pay my visit to Jhau while moving from Mashkai to Las Bela by the route which passes there for the advance of the season and regard for the tasks still awaiting me northward had already while at work in Kolwa obliged me to abandon the intention of extending my survey so far south But when in the course of my enquiries at Awaran I learned of old mounds also in the Nundara valley through which the route to Jhau passes there was sufficient inducement to make the diversion in question

Remains of Gat barit—So on the morning of March 14th we left the lorries and whatever of *impedimenta* could be spared behind at Awaran and set out with camels for Nundara Moving through low foot hills first to the north-east and then up the narrow Pish valley so called from the abundant growth of dwarf palms in its torrent bed we reached the Gat pass after about 10 miles The descent from it eastwards led in a gorge winding between steep cliffs of shale and known as *Gat barit* There the track after a mile passes a curious ruin built on a low rocky ridge at a point where the bottom of the gorge slightly widens It consists of a row of large enclosures each measuring about 24 feet square inside within walls of unmistakably ancient look They are from 4½ to 5 feet thick and built with rough slabs which the nature of the rock available allowed to be quarried on the spot and to be used with a minimum of dressing The walls now stand only to a height of 3 or 4 feet and judging from the absence of debris inside do not appear to have ever been much higher Entrances, about 3' 4" wide are traceable in each room on the side facing the track As in the case of 'Gabar-bands' no plaster or earth has been used in the masonry

inequalities in the height of slabs being adjusted by small flat pieces of stone inserted between the courses No potsherds could be found either within the enclosures or on the slopes below The purpose of the structure would remain even more puzzling but for the presence of a perennial spring about three quarters of a mile further down the gorge The ruin occupies the nearest spot where there is room for a structure of any kind Nowhere else is water to be found between the Mashkai river and Nundara Hence the idea suggests itself that the place was chosen for accommodating a watch post to control traffic on a route possessing some importance as the most direct connexion between Las Bela on the one side and Makran and western Jhalawan on the other A post of this kind to levy transit dues is now found above the point where the route coming from Mashkai and Nūndara debouches into the valley of Jhau

Valley of Nundara—About a mile below the spring the ravine debouches into the Nundara valley This here some three miles wide bears a thoroughly desolate look for beyond a few small patches of cultivation dependent on any flood water that may descend in the ravine from the Gat pass the whole of the flat bottom of the valley is a waste slightly salt encrusted and covered with tamarisk jungle and scrub Cultivation is not possible on this ground nor anywhere else lower down in the valley wide and open as it is for miles for as Musa Khan Mirwari of Mungah who owns land higher up in Nūndara and who accompanied me from Awaran explained the water carried in the Nundara flood bed descends so far only in exceptional years and then loses itself and evaporates on this scrubby waste

Site of Tikri damb—On approaching the opposite side of the valley to the south east and within less than half a mile of the foot of the hills separating Nūndara from Jhau a large mound was reached for which the name of *Tikri damb* was given to me It rises not far from a small patch of cultivation to which a flood bed along the eastern scarp of the valley carries water Its highest portion rises to over 30 feet, but owing to the thick debris of stones from decayed structures it was not possible to make sure whether the whole mound is of artificial origin or whether natural deposits of alluvium underlie at the bottom The main axis of the mound stretches approximately from east to west For a distance of about 150 yards the mound throws off a terrace like another to the south west at a much reduced height The foot of the mound proper along the south side measures a little over 200 yards while the circuit of its top is about 490 yards Fig 45 shows the western portion of the mound as seen from the south west

Ruined walls and pottery remains—About the middle of the mound two large ravines run down to its foot one to the SE and the other to the NW They measure circ 170 and 130 yards respectively, in length and have laid bare a central mass of ruined walls at different levels These walls and others exposed on the top as seen in Fig 43 show rough masonry of exactly the same type as I shall have occasion to describe further on at Siah damb the other ancient site of Nūndara Abundant broken pottery covers the slopes of the main mound and also its lower extension to the south west But painted pieces were

comparatively rare on the surface As the specimens reproduced in Pl XXIV Tik N 1 b show both the earlier geometrical patterns as well as those of the Nal type are represented among them The prevalence of pieces with light red body and additional colours of buff white or purple used either as a slip or for filling the black outlines is noticeable

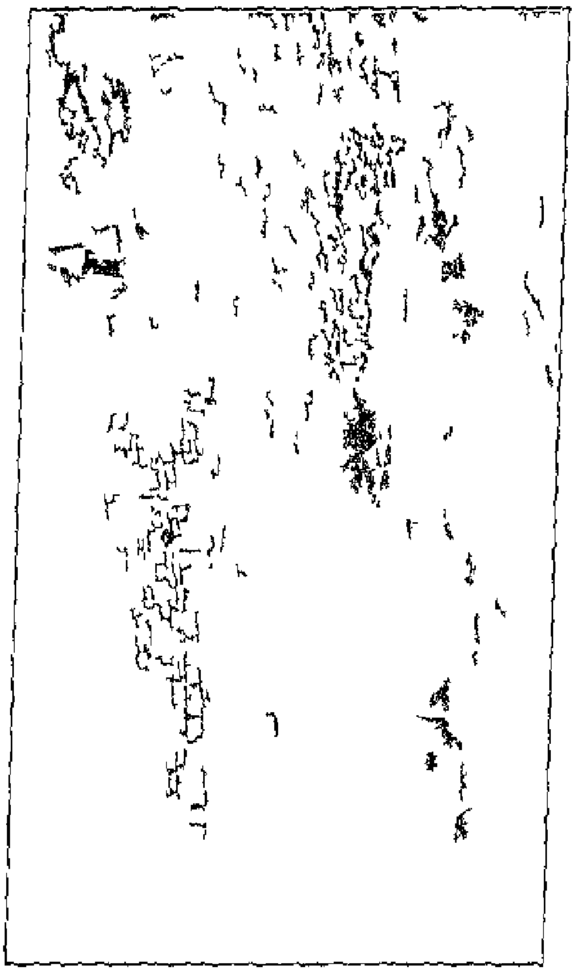
Our camp had in accordance with Musa Khan s direction been sent to Karam Shah damb some 6 miles further up the valley to the north east as the nearest place where water and habitations could be found This prevented prolonged examination of Tikri damb at the time and after my first survey of the Siah damb next day I decided upon the latter site as the one more suited for trial excavation It was hence to Siah band that I devoted on my return from Jhau such time as could be spared for Nundara Nevertheless I believe that the mound of Tikr damb would well deserve future exploration

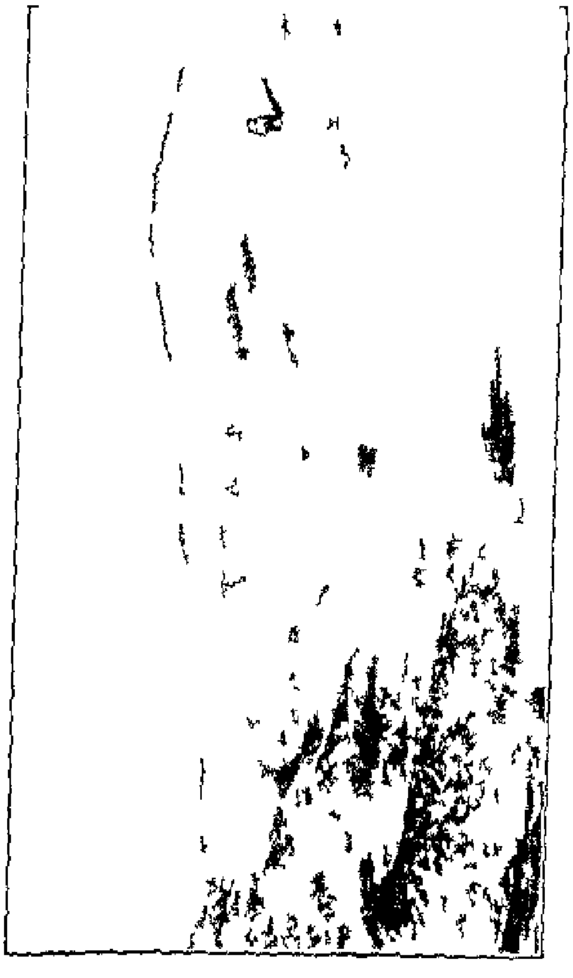
Deficiency of water —What was seen on our way up the level bottom of the valley strengthened the impression received before of the present conditions of Nundara The amount of water received by the valley now a days is manifestly far too small to account for the former existence of fairly large settlements such as the mounds of Tikri damb and Siah damb indicate Nor can the change be satisfactorily explained by the curious bifurcation at the head of the valley through which the Darach kaur the main supplier of drainage fo Nundara sends a part of its flood water into the Nal river which feeds Jhau for a barrage intended to prevent that diversion was according to local tradition still serving its purpose until two or three generations ago and could be restored now also if the necessary labour could be raised from the fifty or sixty families who constitute the whole population of Nundara

Karam Shah damb —The Karam Shah damb below which our camp stood proved when examined in the morning of comparatively late origin It is composed entirely of whitish clay from the decomposed walls of mud structures It is about 30 feet high its top 36 yards across and crowned by decayed mud walls of a little fort which is supposed to have been abandoned seven generations ago What little of painted pottery could be found was either of coarse probably late prehistoric ware or else poorly glazed With this must be classed also the fragment Kar N 1 (Pl XXIV) showing a band of relief hachures not seen by me elsewhere

Ride to Siah damb Nundara —From here we rode to the north east first for half a mile past scattered patches of cultivation and then for two miles farther across an absolutely bare clay plateau cut up by a maze of small eroded ravines Then we arrived at the imposing mound of *Siah damb* by the right bank of the main flood bed of the valley The examination of both its structural remains and its abundant pottery kept me occupied for half the day and proved so interesting that I decided to return to this site from Jhau and to devote to it what time could then still conveniently be spared My account of the observations there made may therefore be left for the next section

March to Jhau valley —The march thence resumed to the south east towards Jhau brought us after crossing a succession of steep ridges by a track imprac-



ticable in places for mounted men into the winding gorge of the Maki kaur There we struck the caravan route which leaves Nundara a little to the north of Tikri damb Following it down for some 11 miles we emerged on the wide trough traversed by the Nal river Across this valley of Jhau fully eight miles broad a fine vista opened towards the bold hill range which divides Jhalawan from Las Bēla Still further away to the south it allowed us to sight far away the high massif of Dhrum Round it the rivers of Nal and Mashkai here united into the Hingol have cut their way to the sea Looking across this great plain as it lay before us under a slight veil of dust shimmering in the light of the setting sun it was difficult to realize that all this southern portion of the Jhau tract is now a waste abandoned to thin tamarisk growth and scrub Moving eastwards for another four miles we halted after nightfall by the first huts of Jhau where water was obtainable from a well

Spet damb of Jhau—On the morning of March 16th we crossed the main flood bed of the Nal river now quite dry to the ESE and after about a mile found ourselves at the foot of the mound known as *Spet damb* It rises to a height of about 30 feet amidst abandoned old fields and small clay plateaus furrowed by erosion Its length on the top from WSW to ENE is some 110 yards and its maximum width there about 70 yards Numerous Nullahs deeply cut into the slopes show that the mound is composed wholly of debris deposits The layers exposed disclose rubble from decayed dwellings embedded in clay but no walls of stone masonry

Painted pottery—Among the pottery debris painted pieces were found in plenty As the specimens Spet J 1 8 Pl XXVI show most of them with boldly executed patterns black on red or buff ground closely resemble the painted ware prevailing at the Awaran sites of Kambar damb and Firoz Khan damb Voluted scrolls and rayed discs as seen on Spet J 1 2 4 are frequently used motifs Not a single piece decorated in the Nal style was found here but a few fragments of glazed ware plain green or blue suggest occupation down to or re occupation in early historical times To these has probably to be ascribed also the globular jar with its small spout apparently placed sideways Spet J 12 (Pl XXVI) which recalls shapes found at Jiwanri and the Moghul ghundai cemetery Late too is the handle fragment Spet J 9 with incised hachures Two small terracotta figurines (Pl XXVI) are of interest Spet J 10 represents an animal difficult to determine Spet J 11 probably from a lid shows a double ram s head, and has its exact counterpart in Bal 4 (Pl XX) from the Balor site The painted pottery, too from the latter shows resemblance in decorative style to that of Spet damb[1]

Siah damb of Jhau—Of decidedly older appearance are the remains on the large mound appropriately known as *Siah damb* the Black Mound found about half a mile to the east It rises over an area of bare clay cut up by many small ravines and is situated about a quarter of a mile from the right bank of a branch bed of the Nal river As the sketch plan Pl 10 shows the

[1] See above p 110

mound is a large one stretching at its foot approximately 470 yards from north to south and some 280 yards across where widest It is almost entirely covered with the debris of stones now weathered black from masonry of the same type as found at the Kulli mound Remains of walls of structures large and small crop out on the surface at many points of the top and slopes

Structural remains exposed —The central portion of the mound, forming a small flat-topped ridge, rises to a height of circ 50 feet over the ground around But natural clay terraces exposed at the southern foot of the mound prove that the mound rests on an alluvial plateau which stands to a height at least of 10 to 12 feet above the present level of the surrounding area Originally at the time of first occupation the relative height of the plateau may have been greater The central ridge is divided by a Nullah from the northern portion of the mound The top of this forms a kind of rim nearly as high as the central plateau At the south western foot of this rim remains of a massive wall built with slabs up to 3½ feet long and over a foot high are exposed Along the central plateau a curving wall of similar massive construction about 4½ feet thick, can be traced embedded in the ground for over 100 yards from NW to SE It ends above the steep slope flanking the above mentioned Nullah on the south This wall can manifestly have served only a defensive purpose

Painted pottery, figurines etc —The painted pottery comparatively scanty, as seen from the specimens (Siah 1 4 Pl XXV 5 7 10, Pl XXVI) shows an unmistakable resemblance throughout to the type prevailing at the Kulli site Only in one small fragment (Siah 11) can some similarity to the pattern of the Nal ware be possibly recognized The animal figure in Siah 5 has its exact *pendant* on the jars and fragments found in Kul 1 The early occupation of Siah-damb is confirmed by other finds also Among them are pieces of cups or bowls (Siah 8) showing the disproportionately small base familiar from the earliest of our chalcolithic sites Then we have over half a dozen terracotta figurines of bulls all broken exactly of the same type as found at Shahi tump and Kulli, also clay bangles and small fragments of worked copper Of plain pottery with impressed patterns Siah 9 (Pl XXVI) is a characteristic specimen, closely resembling with its imbricated design the fragment Kul 1 (Pl XXI) from Kulli From all these indications it appears safe to conclude that this mound was occupied about the same chalcolithic period as the Kulli site It would certainly have offered tempting ground for trial excavations if it had been possible to spare time for the purpose Systematic exploration would, owing to the great size of the mound be likely to claim months

Second Spet damb of Jhau —After crossing the branch bed of the Nal river known as Shank and proceeding a little less than a mile to the east I visited a second mound also known as *Spet-damb* Close to it the telegraph line to Las Bela passes over old fields long abandoned, and overgrown in places by jungle trees of considerable size The mound is comparatively small, measuring at its foot from SW to NE 105 yards, including a terrace like extension on the south Its top at a height of about 40 feet had been levelled by the grandfather of the present Bizanjau chief of Nal who had intended to build a fort there it

measures about 48 yards in diameter The mound wholly artificial is composed of whitish clay from decomposed mud walls with some rubble interspersed Potsherds ashes etc are to be found throughout the exposed layers The comparative lateness of the period during which this mound was formed and its occupation down to mediæval times is proved by the ceramic fragments found on the top and slopes These comprise plenty of glazed fragments both plain and decorated in a style similar to the one seen on the glazed ware from the Sohren damb of Awaran and from Sarbisha[2] The painted potsherds (for specimens Spet II i 3 see Pl XXV XXVI) are all decorated with the free and rather coarse brush work, black over light red or buff ground found on the later prehistoric ware from Kamban damb and other mounds of Awaran Among them are two stylized representations of birds Spet II 2 (Pl XXVI) showing a duck the other Spet II 1 (Pl XXV) some other aquatic bird

Character of Jhau sites —The presence of these three mounds so close together clearly proves that the chief settlement in that southern portion of the Nal river valley now known as Jhau must have stood on this ground from early prehistoric times Its position here can be adequately accounted for partly by the great width of what once was arable ground and partly by the topographical fact that the most direct route from Las Bela to Mashkai and the eastern parts of Makran passes along the line marked by the mounds There can be no doubt about Siah damb marking the site of the oldest settlement and the second Spet damb the one occupied latest

Information about these mounds had reached Masson who briefly notes ' the site of an ancient city in Jhau which tradition affirms to be that of a city founded by Alexander [3] No such tradition was heard of by me on the spot Masson s suggestion that this city might be the Alexandria founded amongst the Oritae cannot be reconciled with what we know of the route followed by Alexander through the territory of the Oritae

Cultivation at Lanjar —At present the area of permanent occupation in this part has shifted considerably further up the valley Leaving the second Spet damb we rode north across a dreary bare plain of clay showing here and there first marks of old cultivation and further on still more desolate ground furrowed by erosion trenches Then after about five miles having crossed the upper course of the Shank branch, I found myself on the eastern edge of the narrow but comparatively well cultivated belt of ground known as Lanjar It is now a days the chief permanent settlement of Jhau the last Census statistics show a population of 718 souls a number considerably in excess of that of the whole Nundara valley The fields of Lanjar stretch along the right bank of the eastern main river bed on gently rising terraced ground and enjoy the great advantage of fairly regular watering from inundation canals The change of scenery to properly tilled fields with crops of barley ripening and cultivators mud built huts interspersed between them was striking

[2] Cf above p 131

[3] See Masson *Journey to Kalat* pp 388 sq

Remains of Adasta-damb—A circuitous path winding between the terraced fields brought us after about two miles' going north westwards to the mound known as *Adasta-damb* It occupies a small island situated between inundation channels a little below the point, a kind of *su-bashi*, or 'head of the waters, as it would be called in Turkestān, where three or four channels start from the western main branch of the Nāl river Low terraces and ridges, thickly covered with much weathered building stones and with potsherds, extend over an area about 190 yards long from north to south and at its upper end about 70 yards across. On the north east and east faces walls built with roughly dressed slabs are exposed, as seen in Fig 46 at heights from 8 to 20 feet above the river-bed These walls belong to separate structures more or less aligned but not forming a circumvallation The debris layers beneath them are full of potsherds The walls are built with regular courses of slabs, mostly small and fairly uniform in height Where the river branch, quite dry at the time of my visit, bends round the north eastern corner to skirt the eastern flank of the site, it appears to have carried off structural remains Painted potsherds could be found only below the ruined structures on the north side and in no great number They show simple geometrical patterns executed in broad brush work similar to that found at the later prehistoric sites of Āwarān

Return to Nūndara—Adasta damb lies close to the foot of the gravel glacis of the hill range to the west As we made our way back along this to our camping place mat huts were passed at intervals temporarily occupied by those who in years of sufficient rainfall are able to cultivate patches of ground along the river bed below Lanjar The contrast between these few scattered nomadic abodes and the picture which the little town marked by the Siāh damb mound must have once presented was striking The only other 'damb' of which I could learn within the Jhau tract itself was said to be situated at Pēlar, in a small side valley over 40 miles up the Nāl river A visit to it would have left no time for the intended excavations at the Siāh damb of Nundara So on March 17th I returned there by a somewhat changed route across the barren hills and with the help of a small posse of diggers collected beforehand was able to start work there the same day

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SECTION III—THE RUINS OF SIĀH DAMB, NŪNDARA

The site of Siāh damb in Nūndara to which our work from March 17th to 21st was devoted occupies an elevated portion of a bare clay plateau which stretches along the right bank of the wide flood bed of the Nūndara valley Its ruins extend over a roughly oblong area which as the sketch plan Pl 11 shows, measures about 220 yards from north to south and circ 180 yards across To the south east there adjoins a narrow belt of low ground which is reached by flood water from the river-bed and for a distance of about a quarter of a mile is normally under cultivation, as seen in Fig 44. The plateau portion, bearing the ruins on the south east and east, falls away very steeply to the shingle and

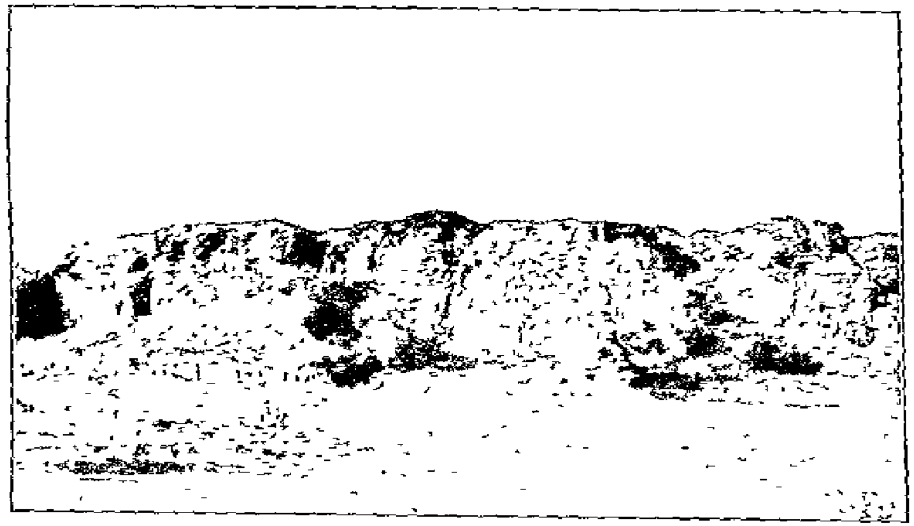


Fig. 17. East face of Shahi-damb, Nundara, with flood bed below



Fig. 18. Walls of ruined dwellings above north-east face of Shahi-damb, Nundara



Fig. 19. Cliff and clay terrace south of N.W. end of Shahi-damb, Nundara

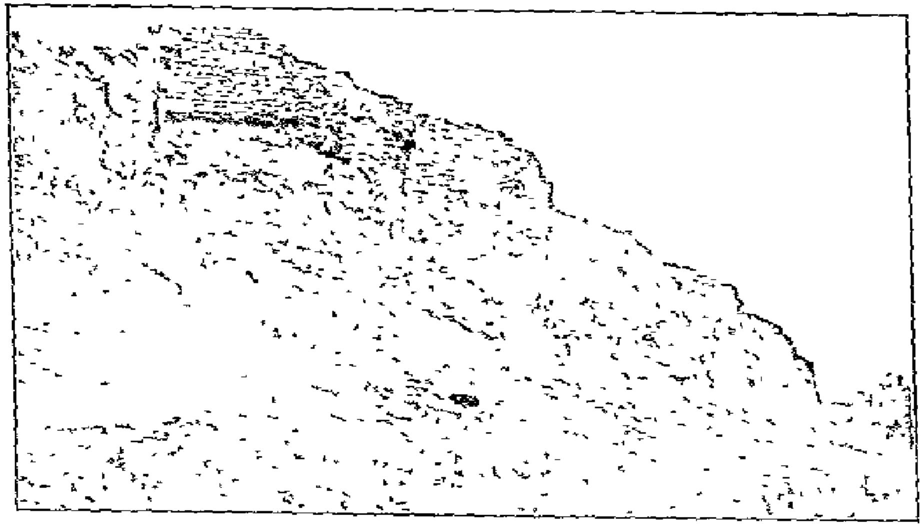


Fig. 20. Walls of ruined dwellings on east face of Shahi-damb, Nundara

sand filled river bed The cliffs here edging the once occupied plateau top are, as the photograph Fig 47 shows quite wall like for the most part rising from about 19 feet to close on 40 feet above the level of the river bed From a close examination of these cliffs it is seen that the debris of stone built dwellings on the top rests on layers of horizontally stratified clay deposits obviously alluvial These are about 25 feet high near the southern end of the east face and thence slope down to 10 feet beyond the northern one

Area of ancient occupation—The central portion of the site reaches a height of 52 feet above the river bed and thence descends with easier slopes to the un occupied portions of the clay plateau on the north and west As the sketch plan Pl II shows the area of ancient occupation is bounded on these sides by small erosion trenches The whole of the ground thus circumscribed is covered with ruined walls of structures built with roughly dressed slabs and with the debris of their stone masonry Remains of such walls are to be seen everywhere lining the top of the cliffs of the east face (Fig 48 50) They are exposed equally clearly by the side of the Nullahs which erosion has cut into the slopes especially on the south east and west (Fig 51 53) Reference to these photographs will best illustrate the construction of these walls which in places still stand to 4 or 5 feet above ground They are built with roughly dressed slabs of shale of various sizes and heights they measure in places up to 3½ feet or so in length and up to 8 10 inches in height but are mostly much smaller Stones of fairly uniform height were used in order to secure an approach to regular courses anyhow for the wall faces the courses themselves varying greatly in height as seen *e g* in Fig 52 54 The courses were set in thin layers of mud small stones being but rarely used to redress inequalities or to fill interstices

Structural remains—Where remains of walls from larger structures still stand well above the ground they have been shown roughly to scale in the sketch plan Where they are more or less buried in debris an indication by symbols had to suffice But from the appearance of the surface which is everywhere thickly covered with stones originally forming part of the masonry it may be safely assumed that the whole of the plateau portion described was at one time or another occupied by structures of the same type That these were often built upon the ruins of decayed ones is made highly probable by the appearance which the 'culture stratum exposed above the natural clay layers on the cliffs of the east face presents as in Fig 50 Elsewhere a succession of foundation levels is seen in the ravines particularly in the one running from the ruins excavated to the south east (Fig 51)

Pier-like wall on E face—At the north eastern corner of the once occupied area a massive stone built wall projecting from the natural clay cliff (Fig 49) attracts attention from the first It rises to a height of 17 feet above the gravel of the river bed towards which it projects like a pier or buttress Its surviving portion is about 9 feet thick and is built partly with masonry of rough stone slabs as already described and partly with rubble compacted like concrete and very hard On the top there survives a wall like mass of clay 2 feet high in this position it can only be accounted for as having belonged to some small

structure built with stamped clay or mud bricks The most likely explanation of the pier like wall below is that it was intended to protect the eastern face of the plateau top and the structures built above it from being carried away by the erosive action of floods in the river bed This solid remnant of ancient masonry has certainly well served this purpose up to the present

Potsherds in layer of alluvium —Another interesting observation was made on the vertical face of the clay cliff which extends northward immediately beyond this pier There can clearly be seen a kind of culture stratum interposed between pure alluvial deposit It starts quite close to the 'pier from a level circ 7 feet below the top of the cliff and shows there a thickness of circ 19 to 24 inches Thence thinning out it sinks down gradually to a level of about 12 feet at a distance of 16 yards from the pier and then disappears at the foot of the terrace In this stratum easily distinguished by its darker colour, there are found besides potsherds small stones pebbles and what looked to me like the produce of decomposed refuse Most of the potsherds cleared from it in a cutting at a point about 9 10 feet below the plateau top were of coarse plain ware some looking as if they were hand made But in the end we found there also three fragments of painted pottery with geometrical patterns in black on red The latter raise a question to which I can see at present no satisfactory answer The unpainted fragments of coarse ware might have been ascribed to a much earlier prehistoric settlement existing at the foot of the mound and separated from the ruins above by a long period during which floods of the river deposited heavy alluvium covering that foot and greatly raising the level of the plateau around But the association of painted fragments of the same type as those found plentifully among the ruins suggests their having been washed down during the occupation of the site and since then buried under alluvium If this assumption is right the absence of such painted ware in the upper layers of clay close to the top of the pier and to the debris covered area of which it marks the corner seems difficult to account for

Painted potsherds from surface —Before I proceed to describe the results of the excavations it was possible to carry out at some of the ruined structures it will be convenient to review the ceramic remains collected from the surface of the site For the sake of brevity it will be referred to further on merely as *Nindara* These remains were entirely restricted to the elevated portion of the plateau within the limits above indicated, but were there to be found in great plenty The abundance of painted potsherds makes the fact still more interesting that with comparatively few exceptions they all exhibit the characteristic features of the Nal type both as regards the designs and the *polychrome* treatment of patterns The representative selection of specimens, reproduced in Pl XXX XXVI will help to illustrate this Only in a few pieces, like Nun 8 10 12 13 27, 37 do we find simple geometrical patterns executed in black over buff or red ground In the vast majority indications of a style closely allied to that of the Nal pottery are met with such as elaborate ornamentation of the designs and additional colouring in yellowish white and a very dark red or purple In the fragments Nun 7 11, 17, 20 21 22 which show



Fig. 31. Ruined structures II–IV, Siah Damb, Nundara, from south-east.

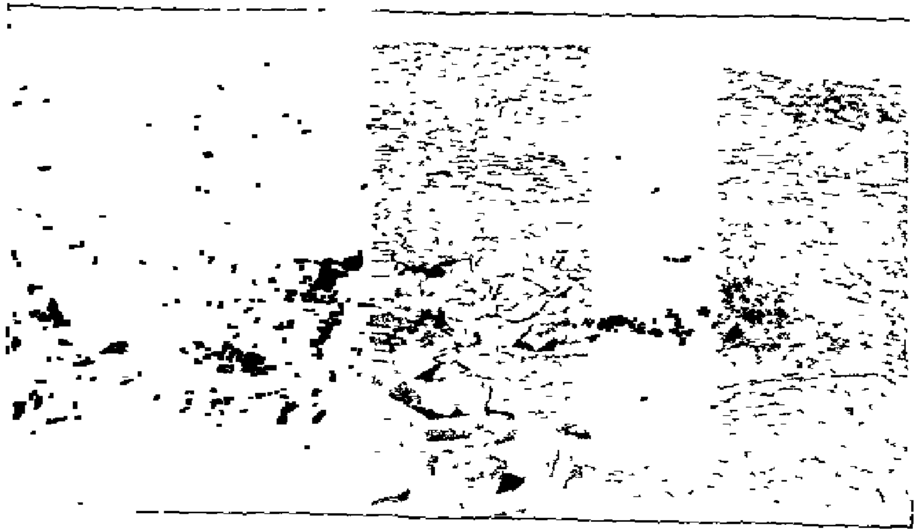


Fig. 32. Interior of structure II, Siah Damb, Nundara, before excavation.



Fig. 33. Ruins of structures above the ravine, Siah Damb, Nundara, seen from south.

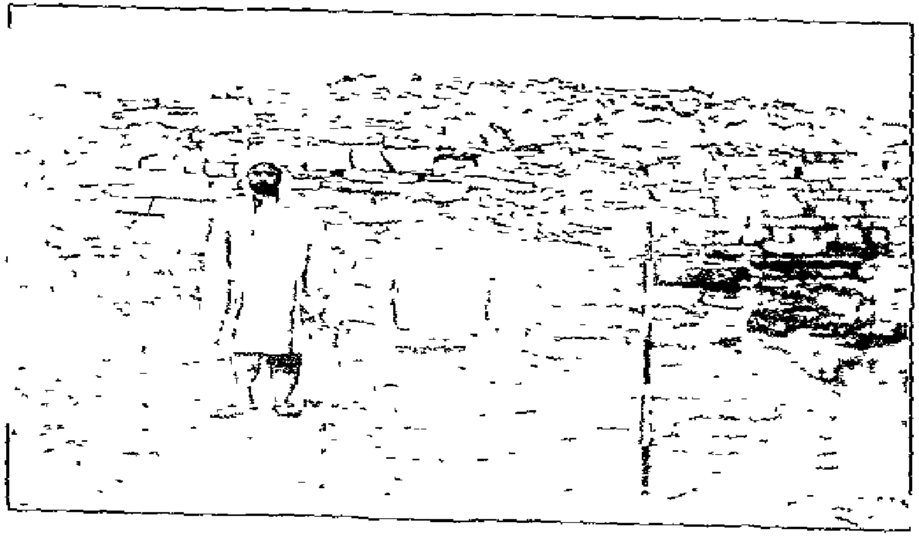


Fig. 34. Structure I, Siah Damb, Nundara, after excavation.

parts of animal figures the subject and treatment are quite distinct from those seen in the corresponding class of painted pottery found at Kulli The same applies to the representation of plants as seen in Nun 18

Decoration and shapes of ceramic remains—As in patterns and colourings so *the great majority of the painted pottery from this Nundara site differs also* in the superiority of its fabric from the late prehistoric ware found at the Awaran and Jhau mounds On the other hand a few fragments like Nun 42 show the simple hook ornament often met with at sites further north in Jhalawan and Kharan which are probably of later occupation The broken state of all painted pottery from the surface makes it difficult to say more of shapes than that very many of the fragments appear to have belonged to open bowls like the partially preserved one Nun 15 (Pl XXV) or else to large pots like Nun 1 2 But the negative fact deserves notice that not a single piece belonging to the class of small based cups so common at the early Makran and Zhob sites was found here On the other hand there must be noted also the total absence of pieces with handles or ears such as would indicate a later period The exact purpose of the fragmentary pottery object Nun 16 (Pl XXV) is uncertain The only recognizable copper object found is the piece of a decorated bracelet Nun 5 a (Pl XXVII)

Absence of terracotta figurines—Special importance must be attached to the fact that not a single of those terracotta figurines of bulls which were so plentifully found at Shahi tump Kulli and Mehi also at the Siah damb of Jhau all sites devoid of Nal type pottery was to be found here either on the surface or in the ruins excavated From this it seems reasonable to conclude that the cult with which these figurines and those of the goddess were probably associated no longer prevailed at the period when painted pottery of the Nal type was in use For that the latter belongs to a period later than that characterized by painted pottery with simple geometrical patterns in black on red appears to be proved by direct stratigraphic evidence at the sites of Shahi tump and Mehi [1] In this connexion attention may be called also to the absence of stone implements at the Nundara site which similarly points to its occupation dating later than that of early chalcolithic sites like Suktagen dor Shahi tump and the Zhob sites

Ruined cella I—Owing to the very limited number of labourers to be secured within the valley excavation was confined to a group of small ruined structures of which the walls could be seen rising above the ground by the side of the deep cut Nullah descending to the south east (Fig 51) Two of them I and II small approximately square cellas attracted my attention from the first by pillar like masonry of oblong shape rising near their centre They lay as the sketch plan 11 11 shows in the same axis only a little narrow lane dividing them Their corners were roughly orientated The structure I which was less deeply embedded in debris and which Fig 54 shows after excavation proved about 15 feet square It was enclosed on three sides by walls of coarse masonry and on the fourth to the south west by what appears to have been

[1] See below pp 16? sq

one of mud bricks This wall was found badly decayed Approximately near the centre rose a block of masonry 6 4" by 5 5 built with slabs more carefully dressed than elsewhere to a height of 9 feet above a rough stone flooring Owing to the facing slabs having fallen off at different places this block pre sented the appearance of being irregularly stepped

Earlier structural remains built over—A very curious and at first a very puzzling feature in this structure was a cross wall 1 8 wide and 2 3 high which came to light joining the central pillar to the NW and SE enclosing walls This wall rested on the rough flooring of stone already mentioned That it was the remnant of an earlier structure which had been built over became clear when a cutting was made down the north east side of the pillar For about 3 feet from the top it proved to be built throughout with stone masonry Below this followed sun dried brick work faced with slabs down to a level approximately identical with the top of what remained of the connect ing wall towards the NW and SE walls From there down to the stone lined floor the masonry consisted again of stone slabs It was thus ascertained that in building up the pillar from the floor level of an earlier building use had been made of what remained of a wall running from SE to NW which became embedded in the later masonry The floor of the later structure was then raised so as to be flush with the top of the connecting wall This explains why distinct remains of a plastered mud flooring had been struck in the north corner on a level exactly corresponding to the top of what was left of the old wall. No deposit of any kind as I was first tempted to expect was found within the cleared portion of the interior of the pillar only a few small fragments of pottery were found which had become mixed up with the mud plaster used between the courses of masonry Little fragments of bones which do not appear to be human but to belong to some small animal lay scattered on the earlier flooring

Central pillar—I am unable to offer any satisfactory explanation as to the purpose which the central pillar or pier was intended to serve It was found with similar dimensions in the structure II (Fig 52) It could be traced also on the surface in three more small structures VI VIII which are marked in the sketch plan Pl 11 but remained unopened It seems difficult to believe that so massive a block of masonry was needed to permit a space of only 14 15 feet to be spanned with beams for the purpose of a roof or an upper floor The fact that in the rooms III V to the east of I and II no such pillars were found speaks against this assumption It must also be taken into account that owing to the insertion of these pillars the space available for habitation within the rooms became limited to mere passages If then such rooms were unsuited for occupation what else could have been their purpose? For the present I must leave the question unanswered

The same uncertainty remains also about the significance of four large boulders roughly globular in shape which were found close to the walls of I either above or quite near to the surface One of them is seen in Fig 54 Could they have served some decorative purpose on a structure which was not an ordinary dwelling place?

Painted potsherds found in I.—Adjoining the decayed south-eastern wall of I through which the entrance must be assumed to have lain, there were cleared the poorly preserved foundations of walls enclosing a room I. ii, which measured 17 by 9 feet. Here was found a considerable number of painted potsherds. As the specimens Num. I. 1–3 reproduced in Pl. XXV show, there are represented among them pieces with simple geometrical patterns in black on red as well as others of the Nal type, the latter greatly prevailing. An unusual pattern is seen in I. 5, and the stylized figure of an Ibex in I. 4 (both in Pl. XXVII). A few fragments painted in black on red ground turned up in I. 1, as also the terracotta head of some animal figure.

Structure II.—The structure II immediately to the SE. of I proved to be built on a level about 5 feet lower than I. As the sketch plan Pl. 11 shows, it consists of a main room, 14' 4" square inside, and two small apartments by its side. That the main room was entered from the NE. could be seen from an opening on that side blocked by fallen masonry, whereas elsewhere the wall still stood to a height of about 11 feet. There was a similar indication also of a doorway leading into the small room II. ii. II. iii was merely a small closet or storage place, without any entrance being traceable on its sides. In II. i the central pier (Fig. 55) proved, just as also in I. i, to have been built over an earlier wall of which the continuation still remained as far as the SW. wall. A cutting made on the NE. side of the central pier showed that at its foot there was embedded the end of that earlier wall. It had been enlarged to the required size partly by mud bricks and partly by additional stone masonry. The surviving height of the earlier wall was 2' 4", and on the same level as its top there were found on the NE. side of the pillar remains of a stone edging to a later floor.

Sun-dried bricks in wall of structure II.—On digging below this level on the same side it was found that the masonry of the enclosing NE. wall near the eastern corner rested on an earlier wall of sun-dried bricks standing approximately to the level of the later floor. The bricks, of which seven courses remained, measured 21"×10"×4". This size agrees closely enough with that of the sun-dried bricks of the wall found between sections vii and viii on the top of the Shahi-tump mound. *This furnishes a valuable confirmation of the relatively late age* assumed for the remains of the deposits there. There is close similarity, too, to the size of the mud bricks excavated by Mr. Hargreaves at the burial ground of the Sohr-damb, Nal, viz. 21"×9"×3½" and 23"×9"×3¾.[1] The agreement is of special interest in view of the prevalence of the Nāl type of pottery at the site. The face of the bricks showed clear signs of having been exposed to fire. It was in keeping with this that in the ground below the stone edging of the floor mentioned above there was found a thick layer consisting of ashes and burnt earth. Mixed with them were small potsherds and white plaster evidently fallen from a higher portion of the wall which had once stood there. Among the potsherds excavated here and the more numerous ones found in II. ii the majority show patterns of the Nāl type and the

[1] See Annual Report, A. S. I., 19[illegible]–[illegible]0, p. [illegible]

rest simple geometrical designs in black This fully agrees with the observations made regarding the painted pottery exposed on the surface The only other object found was a small knife-like fragment of bone, neatly polished.

Clearing of dwellings III-V.—To the east of I, II and beyond an eroded Nullah formed in what probably had been an ancient lane, stone walls exposed to different heights above the ground indicated a complex of ruined quarters (see Fig 51). Of these the dwellings III-V, as marked in the sketch plan, Pl. 11, were cleared The room III, measuring 16 by 12 feet, had its entrance, 3 feet wide, opening towards the lane from the SW. corner There was a fire-place built up with roughly laid stones against the north wall to a height of about 1½ feet. The room IV adjoining to the east was somewhat larger, measuring 18 by 15 feet In the dwelling V further to the south two rooms were excavated. In the smaller one the wall towards the lane showed a small opening high up at the south-western corner, evidently meant to admit light and air. The numerous fragments of painted pottery found in these quarters are almost all of the Nāl type, as seen from the specimens reproduced in Pl. XXVII. In Nun.IV.1, 2, we have fragmentary representations of beasts with long tails curled up on their backs and suggesting leopards or panthers

Conclusions as to dating.—Limited as the extent of the excavation work done during my three and a half days' stay at this Nūndara site necessarily was, its results suffice to prove that when its occupation ceased painted pottery of the Nāl type was still in regular use. Concurrently with this, black-on-red ware with simpler geometrical motifs was also manufactured. Judging from the fact that only these two types of decorated pottery were found at the mound and taking into account that the deep-cut ravines on its slopes are bound to have brought to the surface debris also from the lowest layers, it seems safe to conclude that the period marked here by ware of the Nāl type was a prolonged one. The stratigraphic evidence furnished by exploration at the mounds of Shāhī-tump and Mehī leaves no doubt about this period being later than that from which the main deposits of those two sites date The evidence of such early chalcolithic sites as Suktagēn dōr, Periāno-ghundai, Nazarābād, etc., points in the same direction For the site of Kulli an earlier period of occupation seems to me also very probable while most of the deposits at the mounds of Āwarān are likely to belong to later prehistoric times.

CHAPTER IX.—RUINED SITES OF MASHKAI

SECTION 1—GABAR-BANDS AND MOUNDS ON THE LOWER MASHKAI RIVER

By the afternoon of March 21st we had regained the Āwarān rest house and on the following morning we started with the lorries on the long journey northward up the Mashkai valley. It meant a welcome, if only gradual, change from the heat which in the barren low valleys to the south had made work in the open more and more trying during the greater part of the day Owing



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to the difficulties of the road the lorries had to be kept lightly laden and all *impedimenta* which could be spared for a time sent along on camels

Route up Mashkai valley—Above the open trough of Āwaran the Mashkai river's course lies through a succession of narrow and utterly bare gorges right up to the point where a small area of cultivation is passed near the hamlet of Mungah kalat All along this stretch of ground some 24 miles by the motor track from where this leaves the Awaran trough the slopes are so abrupt and rocky that no chance of cultivation is likely to have offered here even during prehistoric times Anyhow no signs of once cultivated ground could be sighted from the road This after crossing and recrossing the river bed winds among side Nullahs divided by narrow saddles

Ruined enclosures—It was near one of these saddles known as *Dedari* and about 9 miles farther up that a small enclosure was passed built with un dressed slabs of freestone and resembling the enclosures seen near the spring of Gat barit above Nundara The broken walls standing to a height of only 3 feet enclose a square of about 20 feet A few plain potsherds of coarse make were found within A similar enclosure 27 feet square inside was passed 2 miles onward and a third of the same dimension 1½ mile farther on At the last the entrance 4 feet wide was recognizable on the south Among some potsherds of coarse ware found here one showed an indented relief band As the road for the most part follows an earlier camel track it seems likely that these enclosures may mark the position of old watch posts or perhaps halting places

First Gabar bands met—Somewhat more open ground was reached about 4 miles below the modern watch post of Mungah chauki and here a series of 'Gabar band walls were first met stretching down from the slope on the east and across a small peneplain Judging from their direction they could only have served to control rain floods coming down the hill side and to direct it to what cultivation terraces may once have existed below Curiously enough one of these walls crosses a torrent bed, some 15 feet deep and runs up the opposite rocky slope in exactly the same direction from east to west It seems difficult to account for this continuation otherwise than by assuming that when this *band* was constructed the Nullah was only a shallow drainage channel and the ground above the wall now cut up by erosion into little ridges and terraces, capable of cultivation Can all this change of surface be the result of diminished rainfall and consequently increased denudation and erosion? Near the lowest of these Gabar bands I noticed a small ruined enclosure and near it a little circular mound faced with heaped up rough stones just as the one seen near the Gabar bands' first met on the way to Malar[1]

Beyond Mungah chauki the bottom of the valley opens out to a width of over a mile There amidst scrubby jungle small patches of cultivation are met with at intervals Like most of the arable ground higher up in the valley they receive irrigation from black water i e channels conducting water from spring

[1] See above p 114

and perennial pools to be found here and there in the river bed Two miles beyond where the road near Mungali chauki crosses the river there completely dry I noticed once more a succession of 'bands' stretching across the bare stony peneplain Some run down the slope from the broken hills others across the peneplain as if meant to hold up flood water Patches of bare alluvium near them show that by such means a fertile surface layer of soil could still be produced here

Sohr damb of Tank—Then on reaching the point where the Tank river issuing from the hill range to the west joins the Mashkai I visited the site known as *Sohr damb* In the angle formed by the two rivers and about half a mile to the north of the road there rises the remnant of a high alluvial terrace to a height of about 120 feet above the bed of the Tank river Below it extend well watered wheat fields The terrace is eroded into steep cliffs on its north eastern face and on its top bears remains of very rough walls built with large water worn stones and evidently belonging to a ruined circumvallation No structural remains are traceable within the fortified area which judging from the scantiness of potsherds is likely to have served only as a temporary place of refuge Among the painted pottery pieces with coarsely executed geometrical patterns in pink or red over buff ground prevail Like the fragment Sohr. I (Pl XXVII) bearing a voluted and notched relief ornament these pieces recall ware from the great Dabar kot mound belonging perhaps to early historical times

Ughar damb—After regaining the road about a mile from where we had left it we passed for two miles over a small plain stretching between the right bank of the Mashkai river and a chain of low ridges to the west It is crossed in many places by Gabar bands and is known by the name of *Ughar* Owing to the vicinity of the river bed it bears plentiful scrub and tree growth A small portion of this plain was under cultivation until recent times from a Karez now abandoned Where this passes at the foot of a hillock known as *Ughar damb* we pitched camp

Gabar-bands south of Ughar—On examination next morning this hillock formed of conglomerate and about 120 feet high, proved to be covered on its top with remains of rubble built dwellings Among the very scanty pottery found here are two small fragments of painted ware like that found on Sohr damb The ground which stretches to the south from Ughar damb between the road and the low swelling ridges lining the valley bottom on the west proved of distinct interest on account of the extensive *bands* here traced (Pl 13) For about a quarter of a mile a stone faced embankment can be followed along the eastern foot of a ridge apparently intended to catch the rain water from the latter and guide it towards a flat patch of clayey ground lying in a recess of that ridge This patch about 200 yards in diameter was certainly suited for tillage A continuation of the same band now broken seems to have closed the narrow bed through which the drainage from this flat ground now escapes towards the river

[1] See *A Baluchista Tour* Pl XV D L I 11 12

Beyond this bed a continuous embankment some 410 yards in length runs to the south west, keeping at a distance varying from 40 to about 100 yards from the slope of the low ridge The stone walled front of this *band* facing eastwards shows a height up to 10 feet in places the rampart behind measures up to 18 yards across at its foot Where the end of the band approaches a small projection of the ridge it is broken by a Nullah Big boulders lying in line across the bed probably mark the position of a weir

At a point about 300 yards from the north eastern head of this great embankment there diverges another *band* to the south and after some 190 yards turns sharply to the north west towards a small outlier of the ridge Near the corner of the embankment a patch of raised ground is strewn with fragments of pottery among them are glazed and decorated pieces indicating early mediaeval occupation Proceeding from here along the road to the south west smaller *bands* could be seen striking across the low lying scrubby ground eastwards

Then after some 200 yards the north eastern end of an outlying low ridge was struck which on its top bears the remains of rubble built dwellings for circ 110 yards to the south west They are likely to have been occupied by those who once tilled the clayey flat towards the river bed On this flat low stone lined banks dividing fields could be faintly made out and cultivation may have been practised here again in more recent times But the Gabar bands at the foot of the ridges above the road as described and those so abundantly found further up the valley manifestly go back to an early period when climatic conditions were more favourable and the tract could support a much larger population Otherwise it would be difficult to account for the heavy amount of labour which the construction of so many and such massive embankments within a comparatively small area must have involved

Gabar bands above Ughar.—*Even more impressive was the extent of the* Gabar bands met after we had crossed the Mashkai river bed to the left bank close to our Ughar camp The road thence leads up the wide alluvial fan of a large flood bed which descends into the valley from the hill range to the east This here culminates in rugged peaks close on 7 000 feet The fan, fully half a mile across from east to west is covered with a network of embankments on both sides of the road Specially instructive was the examination of two very massive ones reached 1¼ miles away from camp They descend the slope parallel to each other with a uniform distance of circ 16 yards between and are clearly intended to contain and guide a flood channel coming from the hills to the east Their stone faced sides are both turned to the north The southern of the two, *bands* preserved in places to a height of 7 feet, at its lower end serves as part of the enclosures which bound three successive cultivation terraces Each of these contains a flat space of arable soil about 120 yards square in the case of the middle terrace and circ 120 by 80 yards in that of the one below it. The topmost enclosure is of triangular shape and bounded below at its base by an embankment of which the walled face still rises to 12 feet in height

For fully a mile further up the wide alluvial peneplain is traversed by bands descending the slopes both on the east and west and by others running crosswise between them The labour of thus winning arable land from other wise sterile boulder strewn ground must have been enormous Half a mile before reaching the point about 6 miles above our Ughar camp from where the reported mounds of Malasband were to be visited the road took us across a wide torrent bed which after rain must carry an abundant supply of water to the area just described All this now runs to waste

Site of Malasband —The remains of the *Malasband* site are situated among low alluvial ridges which line the left bank of the Mashkai river about two miles below the fort and small hamlet of Gwarjak At the latter starts the narrow but well cultivated strip of ground which stretches up the river banks for some 30 miles to beyond Jebri At Malasband there is found on the left *bank of the river a belt of ground from half to about three quarters of a mile* wide which between the above mentioned low ridges is at times reached by exceptional floods from the river and at others receives a certain amount of subsoil water This accounts for the ample growth of trees and scrub over it

Approaching it from the road we found plentiful pottery debris strewing patches of bare clayey or stony ground Most of the potsherds were of plain coarse ware but there were also fragments of glazed pottery of a type indicating occupation down to mediæval times The damb first visited proved a small natural hillock about 50 feet high apparently composed of rubble deposits from the river and covered with water worn stones No definite evidence of ancient occupation was traceable on its steep slopes But on searching a low clay terrace at its south western foot there were found in one place two pieces from painted pottery bowls showing much effaced decoration in the Nal style (Mal 1 Pl XXVII) A little digging done there brought to light a small fragment of worked alabaster and a few minute bone beads Together with some other fragments of painted pottery all affected by the dampness of the soil they prove that occupation here goes back to the chalcolithic period

Mazena damb —From here a tramp of about three quarters of a mile to the north across a belt of alluvial clay with plentiful scrub brought us to the southern end of the *Mazena damb* (the Big Mound) This is a long stretched natural ridge thickly covered with debris of unhewn stones and striking like the other ridges parallel to the river Its maximum height is about 40 feet It extends from NE to SW for a distance of about 600 yards and has its greatest width of circ 240 yards towards its south western end Along the comparatively narrow crest of the ridge there can be traced the remains of structures with roughly built walls of unhewn stone evidently brought from the river bed One or two of these ruins, with thick walls just showing above the surface appear to have been of large size At the north-eastern end of the Mazena-damb and along most of the lower slope facing the river there can be traced remains of a massive circumvallation about 6 feet thick built with big unhewn boulders In places it still stands to a height of from 3 to 9 feet

Pottery remains.—On either side of this circumvallation painted potsherds could be picked up amidst more plentiful plain ware, while along the crest pottery was distinctly scanty. Among the painted pottery the majority show simple geometrical patterns in black over red (see Maz. 1, Pl. XXVII); some also similar motifs on buff ground. To an early chalcolithic period point the disproportionately small bases of two cups, one of them of dark grey clay, resembling those so frequent at the Zhob sites. There were picked up on the surface two small broken terracotta figurines of bulls (Maz. 2, Pl. XXVII), also fragments of thick perforated ware and of a chipped chert core. All these agree with the assumption of occupation in early chalcolithic times. The presence of potsherds decorated in various ways with parallel incised lines may be noticed. The same types of pottery were found also on a continuation of the ridge to the north-east, separated from the circumvallated area by a small drainage bed and extending for about 380 yards in the same direction. This portion of the ridge is lower, and its top being fairly flat allows the remains of dwellings to be more readily recognized.

Sohren damb.—At the opposite end, too, the remains of Mazena-damb have an extension on the somewhat higher ridge appropriately known as *Sohren damb*, 'the Red Mound'. A narrow gap separates the two. The nearest portion of this ridge is covered with potsherds of plain but manifestly ancient red ware for a distance of about 50 yards as measured at its foot.

There can be no doubt that the Mazena-damb marks the position of a considerable settlement. Its lands probably included the extensive area covered with Gabar-bands in the direction of Ughar as well as the riverine belt now abandoned to scrubby jungle. Systematic exploration such as the site obviously deserves would, owing to its great extent, claim protracted labours. Given adequate time it would offer no special difficulties, since a fair number of diggers could be collected from the villages higher up the valley.

Burial cairns near Gwarjak.—Information received about certain large pots having been unearthed by villagers of Gwarjak some seven years before at a place known as *Lak-kandaqi-dauk* induced me to cross the river and to visit the mouth of a small gully debouching towards it about one mile to the west of Mazena-damb. Here the villagers had been led by an accidental discovery to dig up some thirty earthen vessels containing ashes with fragments of human bones, which they cleaned and took home for domestic use. As in the following year a number of deaths had occurred among them, they carried the pots back, buried them afresh, and established a *Ziarat* at the spot and duly sacrificed there a number of goats, two fowls, and a cow to appease the spirits.

On the stony slope both below and above the new *Ziarat*, a humble enclosure with a few rag-decked staffs, there were seen small scattered stone heaps, roughly circular, similar to those first found at Moghul-ghundai. A number were manifestly undisturbed. From below one little burial cairn quite close to the holes marking previously dug-up deposits there was unearthed the large coarsely made jar, apparently handmade, seen in Fig. 60. It contained small calcined fragments of human bones and ashes, also two charred date

stones probably meant to represent a funerary provision of food It measured 15 inches in height and 14 inches where widest Below another cairn to the south west of the Ziarat were found fragments of calcined human bones and pieces of coarse red pottery showing a whitish surface A few yards below this another burial deposit comprised two smaller pots of coarse ware both containing fragments of calcined bones One was 10″ high, 12 wide and 7″ across the mouth the other showed corresponding measurements of *12 10″* and 8″ respectively In the latter was found also a small fragment of copper

These finds sufficed to prove that the burial customs observed here corresponded partly to those followed at the chalcolithic sites of Zhob and Suktagen *dor* and partly to those noted at the later cemeteries of Iiwanri Zangian and elsewhere in the Kej valley Judging from the way in which the deposits were marked by cairns and from the place in which they were found far away from any ancient habitations it appears likely that they date from the same period as those later cemeteries

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SECTION ii —THE MOUNDS OF GAJAR AND SHAHDĪNZAI

On the morning of March 24th I left Malasband for Gajar, the headquarters of the Niabat and chief village of Mashkai some 13 miles up the valley, where my men were anxious to celebrate the great Id marking the close of the Ramazan fast The strenuous work in the field and the increasing heat had added much to the trials of this month since our departure from Turbat On our drive up the valley it was a feast for my eyes to catch sight again and again of the fresh green of the wheat fields which line the river bank in an almost unbroken stretch from above Gwarjak Most of this cultivation is carried on with the help of irrigation from springs in the river bed In addition the wide *thalweg* with its alluvial flats by the river affords room for Khushkab land dependent on rain floods in the river bed and side torrents That such cultivation could be considerably extended in the main Mashkai valley given a larger and less indolent population was the conviction of Allahdad Khan the capable Naib of the sub division who gave us a hearty welcome at the fort and rest house of Gajar The cooler air to be found here at an elevation of about 3 200 feet was refreshing

Kalaro damb—The following day was used for the examination of the three *dambs reported at Gajar The first visited is* known as *Kalaro damb* and rises above the right bank of the river about 1½ miles below the fort of Gajar It seems a natural ridge composed mainly of rubble deposits from the river, the marks of ancient occupation are confined here to potsherds strewing the slopes Among them painted pieces are scanty but these all show *patterns* painted in black on terracotta or buff and closely corresponding to the type prevailing at the Kulli site Contemporary occupation is hence probable

Men damb—The mound known as *Men-damb* about 1½ miles to the north east of Gajar and a quarter of a mile from the right bank of the main river bed,

proved a site of greater interest It takes its name from the small hamlet of Men about the same short distance to the south of it At first sight the mound owing to the masses of loose stones such as might be found in the river bed, suggests a natural origin But the fact of its rising in complete isolation above the flat bottom of the valley and the observation made at a point about 50 yards from the southern foot of the mound make it appear highly probable that by far the greatest portion of the mound is built up with debris accumulations from ruined structures At the point just referred to the edge of the pottery strewn terrace like area which fringes the mound proper has been cut into by a channel conducting the water of a Karēz There above a natural bank of clay 10 feet high remains of walls built with water worn stones and mud are clearly exposed to a height of several feet There is good reason to assume that the mound proper which rises to a maximum height of circ 35 feet above the top level of the terrace mentioned is composed of similar structural remains The maximum length of the mound including the low pottery strewn terraces is about 190 yards from east to west and its width about 100 yards The top of the mound partly occupied by a modern enclosure measures 75 yards from NW to SE and 50 yards across where widest

Painted pottery and figurines —The fragments of painted pottery collected on the surface show close affinity in patterns and colour to the painted ware of the sites of Kulli and Siah damb Jhau This observation is fully borne out by pieces like Men 1 (Pl XXVII) with the same incised decoration as found at both those sites and still more by numerous terracotta figurines of bulls like Men 2 3 (Pl XXVII) The latter specimen shows perforations through the hump and thighs Finally we have striking evidence of that affinity also in the very archaic head of the goddess Men 4 (Pl XXVII) The Men mound in view of its early date would invite excavation especially as the village of Gajar which together with the hamlets near by counts over 400 people could readily supply the needful labour

Gajar mound.—The third 'damb' of Gajar is a small mound (Fig 59) rising a few hundred yards to the south of the present fort containing the Naib s quarters Its top was occupied until quite recent times by a now destroyed fort of the local Mirwari chiefs Its walls are built with rough stones set aslant to right and left in alternate rows and thus prove their modern construction The mound at its foot is composed of a natural terrace of clay up to a height of circ 10 feet Above this rise layers of debris containing the remains of massive rubble built walls to a height of circ 25 feet That the terrace was occupied in prehistoric times is indicated by fragments of painted pottery found at its foot but they are too few to permit of any closer determination of the type

Gabar-bands absent above Gajar—On the morning of March 26th I left pleasant Gajar accompanied by Sirdar Rustam Khan of Jebri in order to survey the other and larger 'dambs' reported up the valley The road led well above the left bank of the river and passed for the most part khushk ba

cultivation up to where the bold Laki hill (4 200 feet on the map) projects into the wide bottom of the valley At its foot I noticed two small cairns and old Muhammadan graves While moving up the wide open trough of the valley across the numerous shallow flood channels which descend from the high range on the east I could not help being struck by the total absence of Gabar bands which below Gwarjak had been so conspicuous a feature in the valley It was the same all the way further up the Mashkai Valley as far as our route led through it The fact though a negative one seems to call for an explanation. The one which has occurred to me as the simplest in view of the particular physical conditions of this limited area, is the following

Embankments such as I have described in the eastern part of Kolwa and in the Mashkai valley below Gwarjak, would be useful for controlling the drainage and depositing fertile soil only where ground potentially arable but beyond the reach of regular irrigation is approached closely by hill sides of comparatively limited extent and drainage Where large valleys gathering big volumes of drainage debouch on to a wide glacis or where the mouths of such valleys lie miles away from ground with fertile soil and a slope sufficiently easy to be terraced embankments of the type such as those early builders of Gabar bands could construct would not prove sufficiently strong to meet the onrush of flood water and to turn it to good use Or else the vagaries of the torrents ever raising their beds by the masses of boulders and detritus carried down and then obliged to seek fresh channels would after a time render the laboriously constructed dams useless

Mound of Nokjo Shāhdinzai—About 11 miles above Gajar the road passes two small palm girt oases situated within a mile of each other and distinguished as *Nokjo Shahdinzai* and *Nokjo Gazozai* They both obtain irrigation from Karēzes fed by the subsoil drainage of a wide side valley which descends from the range to the east Judging from the available supply of water the area of cultivation could here be considerably extended and support a population beyond the 600 souls located at the two villages in 1920 1 Close to the western edge of Nokjo Shahdinzai village ensconced amidst clumps of date palms, there rises a conspicuous mound (Fig 58) Its extreme southern foot is skirted by the channel in which the water of the Karez is carried down to fields near the river Ancient pottery is to be found in plenty for about a quarter of a mile before reaching the mound from the road The mound rises to a height of about 36 feet and measures about 300 yards at its foot from north to south At its broader western end its width is approximately the same Its top is level for about 70 by 50 yards and crowned by a ruined fort which was occupied until recent times The walls are built with large uncut stones obviously taken from the debris of earlier structures

Types of painted pottery—Painted potsherds are found in abundance all over the slopes and also on the top of the mound proving prolonged occupation during prehistoric times The specimens reproduced in Pl XXVII illustrate the varied types of patterns Very numerous are pieces like Shah 3 4 12 showing

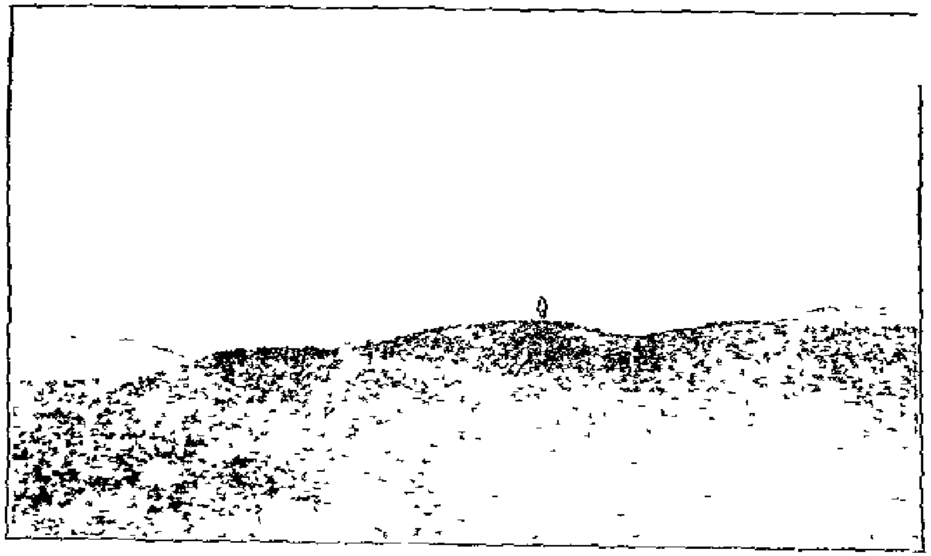


FIG. 57. SOUTH-WEST PORTION OF MERI DAMB, WITH TERRACE [illegible] IN FOREGROUND, BEFORE CLEARING.



FIG. 58. MOUND OF SHAHDINZAI WITH BURIAL CAIRN IN FOREGROUND.

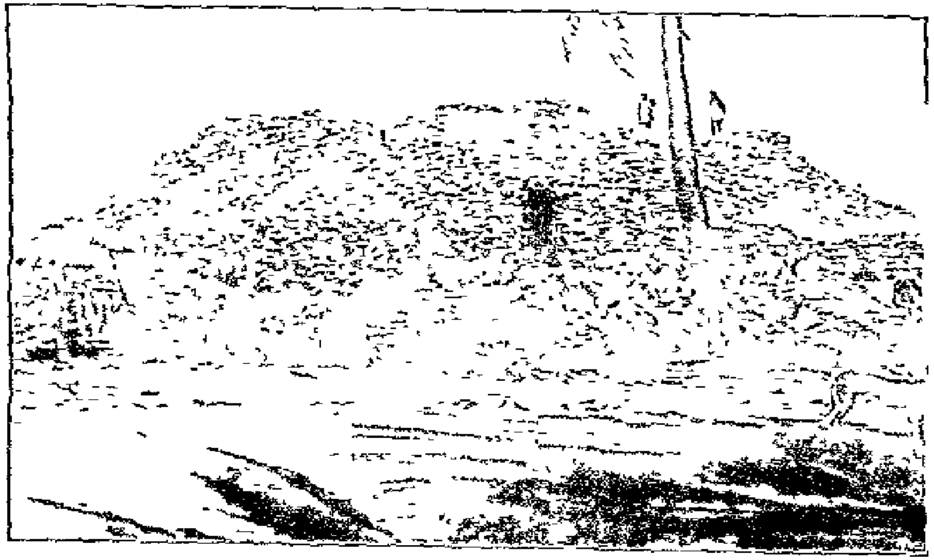


FIG. 59. FORT DAMB AT GATAR SEEN FROM SOUTH.

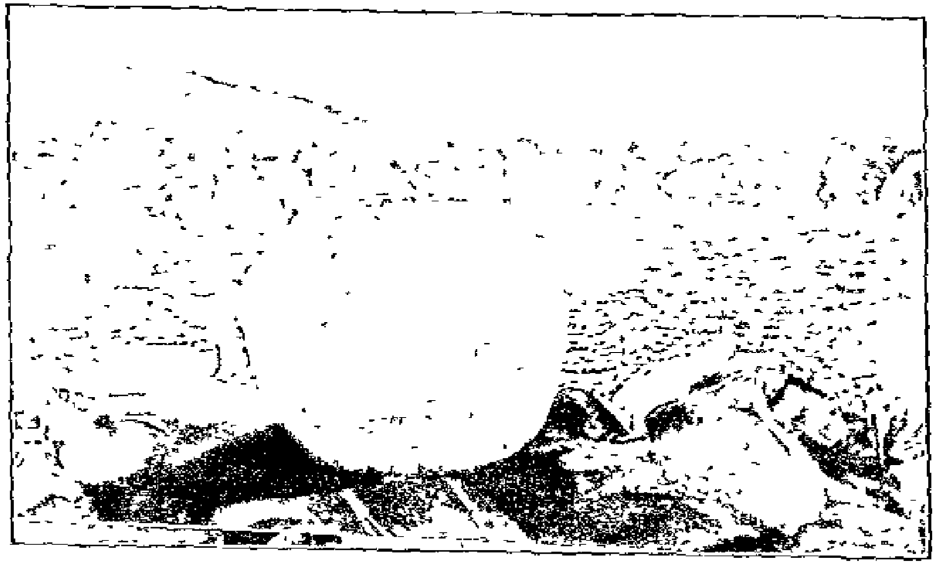


FIG. 60. CEMETERY FOR [illegible] BURIAL [illegible] KANDAOL-SHAH, GWARGAI.

simple geometrical motifs also hachured leaves and scrolls neatly executed in black over a fine dark red slip Other more elaborate patterns which are painted in black over terracotta or buff and sometimes comprise also animal figures as on Shah 2 6 7 13 belong to the type which prevails at the Kulli site There too the impressed ornament of Shah 8 has its exact counterpart To a somewhat later period I am inclined to ascribe pieces of less careful execution like Shah 9 with a voluted scroll ornament and others like Shah 5 11 where painted ornament is combined with relief decoration The absence of polychrome painting, including that characteristic of the Nal type deserves particularly to be noted

A significant indication is supplied by the numerous fragments of bull figurines all badly broken and by a figurine of the goddess, now headless but showing the characteristic base below the waist Shah 1 These clearly point to close relation in time and civilization between those who occupied this site for a prolonged period and the population which has left its relics behind in the lower strata of Shahi tump and at the large sites of Kulli Siah damb Jhau and Mehi (see below) Fragments of clay bangles were found but no stone implements

Burial cairns—Below the south eastern foot of the mound and beyond the edge of the pottery strewn ground there could be seen some roughly formed stone enclosures as shown by Fig 58 in the fore ground A few measured approximately 5 by 4 feet, others less In one opened there were found below only 5 to 6 inches of earth part of a skull apparently of a child with other bone fragments By its side stood an open flat bowl, 8 inches wide at its mouth and a small jar measuring about 4 inches in height and across its bulging sides Both vessels contained ashes and were of plain very coarse ware In an adjoining enclosure only a few bone fragments were found There can be no doubt about these burial deposits belonging as at Jiwanri Zangian, etc to a later period

Move to Mehi—The same day a short move 6 miles further up the valley brought us to the Damb of Mehi situated at the north western foot of the precipitous rocky hill which the map marks with the height of 4 717 feet On the first rapid survey of the site the finds on the surface proved so interesting that after inspecting also the two small 'dambs' reported at the village of Jebri 1½ miles beyond and described further on I had the camp pitched in a palm grove to the north of the Mehi damb with a view to trial excavations

Jebri village is the last permanently inhabited place in the north of the Mashkai valley and enjoys the benefit of several Karezes fed by subsoil drainage from the river bed Among the semi nomadic households who cultivate the extensive Khushkaba fields of Mehi with help of flood water from the river it was possible rapidly to collect labour and the two Sardars of Jebri offered willing help So by the morning of March 27th work could be started at the Mehi damb with some 90 diggers a respectable number for these parts

SECTION iii —REMAINS OF THE MEHĪ SITE

The mound of Mehi rises between the foot of the precipitous cliffs of the Mehi hill and a stretch of fields to the north and west As the sketch plan Pl 12 shows its maximum extent from NE to SW is about 360 yards and its greatest width in the opposite direction about 330 yards The highest portion of the mound a kind of modest acropolis rises to 50 feet above the field level It is heavily encumbered with fallen walls of rough stones Both to the north and west it drops down very steeply to torrent beds which descend from the hills towards the river Floods in those beds have in more than one place laid bare ancient walls and debris layers To the east and south the mound shows easier slopes and terraces all encumbered with the debris of decayed stone walls Here and there the rough masonry of such walls is still traceable standing to a height of 2 or 3 feet above the surface All over these terraces and also over the top are scattered late enclosures of heaped up stones which appear to have served as shelter for flocks or for the location of mat huts

Remains of walls exposed —Walls built with large unhewn stones and lacking regular courses crop out in places from the debris also on the northern and north eastern slopes of the mound The interstices in their very rough masonry are filled with earth and small stones At one point the cutting of a deep bed partly artificial has exposed remains of a massive wall overlain by debris In this bed flood water from the hill sides to the north of the Mehi hill is conducted round the mound and thus prevented from breaking the embankments protecting the neighbouring fields Some 25 yards higher up in this cutting the mound shows a vertical face to a level of circ 16 feet above the bottom of the Nullah Here one of the labourers declared some years before to have noticed a hollow in which complete pots were exposed The debris mixed with potsherds which was believed to have hidden the hollow was cleared but without revealing the spot In the course of it the following stratification was observed at the bottom 8 feet of rubble and earth next 4 feet of rough stone masonry and on the top of this again clay and small pieces of rubble

Abundance of potsherds —All over the mound plain potsherds of superior red ware and also painted pottery fragments could be found But from the first the great abundance of the latter attracted attention to the terrace like top of a small spur jutting out to the south west at a height of about 30 feet Unfortunately hollows on the flat surface clearly indicated that this area had been disturbed in recent years and from Sirdar Rustam Khan I soon learned that Jebr villagers had dug up pots here for use in their homes They were said to have been of large size and plain but only one of these could subsequently be secured for inspection The painted pottery of which a great quantity was collected here on the surface and of which characteristic specimens (Mehi 1 12) are reproduced in Pl XXVII showed very close resemblance in patterns colour and material to that found at the sites of Kulli Siah damb Dau and Shahdinzai The numerous pieces with simple geometrical patterns carefully painted in black on a dark red slip like Mehi 3 6 9 10 12 strikingly

recalled also the early chalcolithic ware of the Zhob and Loralai sites. Other more elaborate patterns in black over red terracotta or buff slip with animal and plant forms like Mehi 1 2 5 8 14 have their exact counterparts among the painted pottery of the Kulli site. Only on two small fragments, Mehi 15 16 were to be found motifs and ground colours, creamy white and a deep purple, which are peculiar to painted pottery of the Nal type. On the other hand the piece Mehi 13 shows the mat-marked treatment of the surface which is frequent at early chalcolithic sites. Mehi 17 (Pl XXX) an intact cup of plain red ware found on the surface evidently comes from a disturbed burial deposit.

Figurines of bull and 'goddess'.—Full confirmation of the indications derived from the pottery on the surface was furnished by a dozen or so of bull figurines which were found there. They were all broken. Of three representations of the goddess little more survived than the lower portions of the bust. Everything combined to show from the start that the terrace over which painted potsherds lay so thickly was covered with remains of a period approximately corresponding to that during which chalcolithic sites so widely separated as Pēriano ghundai and Kulli had been occupied. The excavation effected over this area, *marked II III in the sketch plan* brought to light plentiful relics of interest and finally cleared the question as to how its deposits had been formed.

Trial trench I cut.—In view of the disturbance these deposits had suffered through the villagers' previous diggings it seems advisable first to give an account of the evidence which the cutting of a trial trench I yielded. This was carried from a level about 10 feet above the foot of the mound over a distance of some 75 feet up the slope to the western edge of the excavated area on the top of the terrace. The width of the trench was 6 feet and the average depth reached in its nine sections about the same. Throughout the ground here proved to have remained undisturbed. The observations and finds made throughout from the lowest section I 9 to the uppermost I 1, justify the conclusion that the slope of this outlying portion of the mound is here covered by a thick layer of debris in which the remains of cremated human bodies were buried during a period approximately co-eval with the prehistoric occupation of the mound. This custom of disposing of the dead after burning agrees in essentials with that observed at the early chalcolithic sites of Zhob as well as Suktagen-dor. But while at these sites large pots were used for the deposit of the ashes and bones from completely cremated bodies, the remains found in different sections of I indicate that besides this other and more perfunctory methods were in use here.

Human remains in I 8,9.—Thus in I 9 large fragments of calcined human bones were covered with a large broken bowl and amidst them lay the small painted jar I 9 1 (Pl XXVIII) broken in antiquity and containing earth mixed with ashes. There was nothing to indicate that the fragmentary cups, dishes, small bowls and miscellaneous potsherds found close by, of which specimens are seen in Pl XXVIII, had any connexion with these remains. Nor can this reasonably be assumed of the bull figurines which here as in all other sections as well as

throughout II and III turned up in great numbers. Almost as frequent as these were throughout the figures of the goddess, the varying representations of which will be discussed further on. The head of one with grotesque bird-like face, I. 9. 7. a (Pl. XXXI), was found in I. 9, besides the torso of another showing well modelled breasts. Whether the figurine I. 9. 6 (Pl. XXVIII) is meant to represent a ram or some other animal with curved horns is doubtful.

In I. 8 a large pot, broken in antiquity, was found at a depth of 4 feet. It held small bone fragments and ashes besides the broken high base from a large cup or bowl. The pot was kept in position by stones fixed around its foot. In the same section but on a level about one foot lower there lay six skulls in a heap over calcined bones. The skulls were all small, some looking like those of children, yet some of the mixed bones cleared were manifestly those of adults. Under one of the small skulls to the left lay a child's copper bracelet, I. 8. 2 (Pl. XXXI). All around the earth was permeated with charred fragments and ashes, suggesting that cremation had taken place on the spot and the remains of the bodies been subsequently collected there. Under another skull to the right lay a broken pottery cup like I. 9. 5 (Pl. XXVIII).

Finds in sections I. 5–7.—The sections I. 5–7 yielded no definite burial remains but numerous small cups and jars, all damaged. Specimens of them are seen in Pl. XXVIII. Whether painted or plain, they all closely resemble in shape those found within cinerary vessels at Periano-ghundai.[1] In those from I. 6 small bones and ashes could be recognized. The small dish I. 6. 2, the high base of a painted bowl, I. 6. 3, and the fragmentary little bowl of black stone, I. 6. 4, with an incised geometrical pattern, deserve notice. The quaint beast of which the head is preserved on the large painted potsherd I. 7. 2 closely recalls the similar design of a bull found at Kulli (see Pl. XXI, Kul. I. 1. 6).

Burial deposits in section I. 4.—In I. 4 a burial deposit was again unearthed in the shape of the large urn, filled with earth, bone fragments and ashes. A broken saucer-like piece of pottery covered its mouth. In the same section was found a small jar, I. 4. 1, holding bone fragments. The broken high beaker, I. 4. 2, with its disproportionately small base recalls by its shape some of the funerary ware from Shahi-tump. That it had served for ordinary use is not subject to doubt in view of its strong well finished make. Among the miscellaneous pottery fragments found here mention may be made of the piece I. 4. 3 from a small pot of very fine grey clay which on its wall is provided with an ear. Here too was found one of the very few painted potsherds from this site in which an additional colour, a very dark purple, is used besides black on buff ground. Two more fragments of this kind turned up in I. 2.

Ceramic finds in I. 1–3.—Section I. 3 also yielded numbers of fragments from small cups, among them I. 3. 1, notable for its elegant base. Both in I. 1 and I. 2 broken bull figurines lay close together in small heaps. The same was the case in the topmost section, I. 1, and there some of the neatest examples of the local potter's work were found, but all damaged. Such are the tall elegant vases,

[1] See N. Baluchistan Tour, Pl. XII, XIII.

I 1 2 9, with a fine red slip the little painted saucer I 1 1 the painted bases of bowls I 1 4 5 We have pieces from flat dishes painted on the inside in I 1 6 8 and from the wall of a large painted bowl in I 1 7

Clearing of area II—III —As already stated the topmost section of the trench I adjoined the edge of the debris covered flat area on the top of the south western terrace of the mound This area was completely cleared and proved to be covered with a layer comprising earth and small stones mixed with broken pottery, ashes and burial deposits to an average depth of about 3½ feet The extent of this area was approximately 120 feet from north east to south west and close on 40 feet across No structural remains whatever were met with in the course of the excavation This was carried on along the longer axis of the area but from opposite sides marked II and III respectively Consecutive sections were indicated on both sides merely for the sake of facilitating determination of the find spots of individual objects

Area used as burial place —The general character of the objects was very uniform throughout as far as remains of painted pottery and terracotta figurines were concerned Consequently it will be best to review them *en masse* after noting first those special finds which throw light on the use made of this area *as a burial ground Observation extending over the whole area showed that* for over one foot from the surface the soil was mostly loose This indicated the approximate depth to which the ground had been generally disturbed by the villagers digging for pots etc Below this level the ground was harder and full of small rubble which might have been deposited from completely decomposed mud structures Below the depth of circ 3½ feet the layer containing plentiful pottery debris etc ceased completely and our excavation was therefore not carried lower down Owing to the total absence of recognizable structural remains above this limit it was not possible to determine with any certainty whether the layer thickly permeated with potsherds had been deposited during a period of protracted occupation of this area before it came to serve as a kind of cemetery or whether this accumulation of pottery debris was due to use made of the plot as a waste space for depositing rubbish In any case it is important to *note that the painted pottery and terracotta figurines uniformly found throughout* the layer show exactly the same types as the corresponding finds from trench I, already described and from the cutting IV made on the slope of the highest portion of the mound to the NE of II III (see below)

Copper objects deposited below bones —It may be a result of the preceding disturbance of the top portion of the ground that no human remains or ashes were noticed until in section II 2 there was found at a depth of 2 feet a small collection of calcined bones Below them lay the large mirror II 2 1 a *and decorated hairpin II 2 2 a both of copper and reproduced in Pl XXXII* also the fragment of a small bottle The mirror 5" in diameter has an elegant handle and the hairpin 6" long a large neatly worked head This burial deposit is of special interest because the find having been made in ground obviously undisturbed definitely proves that cremated remains were sometimes buried without having been placed first in cinerary pots, as was the case with the burials of I 4

III 10 etc and at the Zhob sites It also makes it clear that the potsherds and fragmentary bowls and cups found in the same section near by did not form part of the deposits as they would in this case not have been found scattered on varying levels

Burial deposit in III 6—It was different with the instructive burial deposit unearthed in III 6 Here at a depth of 2½ feet and overlain by a mass of pottery debris there were first found three large conical cups of uniform size (III 6 2 Pl XXX) stuck together and embedded amidst plentiful ashes and remains of charred wood Within the middle cup lay the small copper bowl III 6 4 (Pl XXXII) Close to the cups were found the thin copper disc probably used as a mirror III 6 5 (Pl XXXII) and two copper bangles III 6 6 7 with the fragment of a third A small neatly decorated bone stud or seal III 6 18 (Pl XXXI) was also found here

Close behind these objects and on the same level there was found a partially burnt skull lying in a broken condition amidst ashes and fragments of charred wood with which were mixed small bone fragments On the top of these lay three terracotta figurines of the 'goddess' of the usual type also a copper hairpin, III 6 9 (Pl XXXII) 4½" long with a lapis lazuli bead stuck on its head Below the skull and bone fragments there was a layer of burnt earth and ashes about one foot thick Everything pointed to the body having been cremated at this spot and the cups and other objects having subsequently been placed near what remained of it It was of interest to observe that several small fragments of painted pottery were also contained in the earth mixed up with ashes From this it may safely be concluded that the ground was already covered with potsherds at the time when the cremation and burial took place

Cinerary urns—By the side of such simple burial on the spot of remains of cremated bodies their deposit in cinerary urns was also practised This became evident from finds made in sections III 10 11 adjoining the topmost portion of the trench I In III 10 there came to light under 1½ feet of earth and pottery debris a large urn It measured 22 in height 24 in width and 18½" across its mouth The base was only 5¾" in diameter It contained near the bottom a cremated and broken skull together with a small bronze bangle Above this lay ashes and on the top loose earth with small bone fragments A second cinerary urn of small size found under only one foot of earth held below bone fragments including parts of a child s skull together with ashes and above amidst earth some fragments of small pots and of a bull figurine Whether these were placed there on purpose or only accidentally is uncertain

Contents of cinerary urn in III 5—In section III 5 and not far from the skull and funerary deposits III 6 1 10 there was discovered a third cinerary vase under 2½ feet of earth and pottery debris It measured 15½ in height 18" in width and 13 across the mouth Its contents were a large stone with smaller ones embedded in earth around it next a layer of earth with ashes and fragments of charred wood and pottery including a painted potsherd In the same layer were small pieces of calcined human bones with the lower portion of a figurine of the goddess among them Then followed another layer of earth

and on the top a large stone nearly closing the mouth Though the deposit of bones was here scanty care had been taken to protect them The contents of the intact cinerary vessels now described dispose of the surmise which had at first occurred to me that many of the small bowls and jars found in a fragmentary state in II and III might have originally been contained within large cinerary vessels as at Periano ghundai and subsequently thrown out and broken when the villagers were digging out and removing such pots

Shapes of pottery from II III—Of the many pieces of pottery found in II and III which on account of their decoration or shape are of interest I have endeavoured in Pl XXIX XXX to reproduce representative specimens They comprise further illustrations of the types which have already been noted when reviewing the pottery finds from the surface Hence briefest references to characteristic pieces will suffice The large goblet III 6 13 9" in diameter and 8½ high found broken but nearly complete is a fine example of the potter's craft It belonged to the same burial deposit in III 6 which yielded the triple set of large conical cups III 6 2 3 Painted bases of high tazzas or goblets are illustrated by II 7 4 and III 2 1

Specimens of the prevailing types of small cups and jars either with diminutive bases or else with flat feet are seen in II 5 2 10 1 III 15 1 3 1 4 2 4 11 2 and III 4 1, 11 1 Little flat saucer-like cups like II 2 1 7 1 are very frequent They may have served for lamps Specimens of painted bowls, with fairly straight walls and wide mouths are III 1 3 4 3 5 II 3 1 To similar bowls are likely to have belonged III 6 12 II 1 1 a 4 2 5 3 Painted decoration inside is shown by the fragments of cups III 7 3 II 6 3 The two pieces II 2 2 5 1 both hollow look as if they had served as top portions of lids The saucer or dish II 2 5 shows a painted pattern very common in similar pieces of varying size Another pattern is seen in II 1 5 III 3 2 is apparently the haft of a flat dish or pan

Painted decoration of pottery—Turning to the types of painted decoration we find those usual on the outside of large vessels illustrated by the pieces II 1 2 a 4 5 8 2 III 2 6 5 1 Animal figures frequently found on the outside of both large and small vessels are bulls (see III 1 1 4 8 8 1) and large horned mountain sheep or goats (II 4 2 3) A bird (hawk ?) is shown outside on II 1 2 a Inside open dishes or bowls are seen well drawn fishes (II 1 7 8 1 III 1 5, 3 4 4 6) large horned mountain sheep (III 13 1) or bulls (III 1 6) On the outside of smaller cups bowls or jars geometrical patterns are most frequent They are composed of straight-lined figures often hachured within simple scroll zigzags or hooks Plant motifs as on II 1 5 4 5 III 5 1 a 6 11 are far rarer In the great majority of pieces the painted decoration is executed in black over a red or dark terracotta slip A fine red slip is found often also on unpainted vessels like III 6 2,3,13 Otherwise the buff terracotta ground colour of clay is left on the surface of both painted and unpainted ware (e g III 11 1 3 2 5) It is important to note that among the hundreds of painted fragments I could find here only three on which a second colour, a very dark red, has been used as a band in addition to black over a light terracotta ground (II 1 1 9 2) Most

with curved lines and other characteristics of the Nal type are conspicuous by their absence

Carved stone fragments, figurines—Of decorated pottery apart from the painted ones we have a few pieces ornamented like II 4 4, with an incised or impressed pattern showing a cleverly designed circular swirl or wave line In each case this impressed motif is found in the centre of the inside of a dish or open bowl Of grey ware only very few pieces, less than half a dozen, were found, all unpainted Except for one small fragment of an alabaster cup the only examples of stone used for vessels are the neatly worked bowl III 6 11 and the incised fragments, II 1 3, III 11 3, all carved from a fine grained grey stone The fact that not a single piece with relief decoration was found either here or elsewhere at the site as well as the total absence of handles deserves special notice Throughout II and III terracotta figurines both of humped bulls and 'goddesses' were found in very great numbers To these and the other figurines of the same types unearthed reference will be made further on

Finds in trench IV—In order to test the ground on the higher portion of the mound a trench 10 feet wide, marked IV in the plan was dug up its slope from a point circ 65 feet distant to the north east of the debris area III The highest section i in this trench reached the top level of the mound The trench was cut to an average depth of 6 feet and throughout yielded broken pottery exactly resembling in make, decoration and shape that found in II III But the quantity was comparatively small Terracotta figurines also turned up in all sections From the fact that under the heavy mass of rough stones strewing the surface of the slope only loose earth and small rubble were struck in the lower sections up to 2 it may be concluded that the structures the debris of which is embedded in the mound were mostly built with sun dried bricks, stamped clay and small stones set in mud The absence of stone masonry of the kind which is so abundant at Kulli and the Siah dambs of Jhau and Nundara is accounted for by the great hardness of the rock composing the hills about Mehi, apparently limestone, far more difficult to work than the shale prevailing near the former sites

Structural remains and finds in IV 1 2—Only in the topmost sections 1 and 2, were structural remains traceable in the shape of walls of rough stones set in mud In the corner of section 2 there was found near the wall separating it from section 1 a large flat slab, measuring about 2 by 2½ feet and marking a hearth The earth was here reddened by fire also the mud bricks which supported the slab Several terracotta figurines were found in this room, also the small elegantly shaped vase IV 2 1 (Pl XXX) Section 1 by the side of a small apartment not completely cleared contained a recess about 2½ by 4 feet The earth filling it showed signs of having been exposed to fire In it there were found a concave grinding stone and a flat roller, of exactly the same rough type as discovered in the dwelling Kulli I Here too was found the large painted jar IV 1 1 (Pl XXX), closely resembling in style and pattern of decoration the jar Kul I vm 1 (Pl XXIII) It had suffered damage along the rim in antiquity and owing to inferior make broke in course of extraction The painted

decoration too in brown over buff ground is very coarsely executed The difference of make and decoration from the fine black on red pottery found lower down on the mound and especially in II III is so great as to suggest in conjunction with the position of the room IV 1 on the very top of the mound that this jar belongs to the latest period of prehistoric occupation of the site

Terracotta figurines abundant—Some special remarks are still due on the terracotta figurines which were found in such abundance at this site A representative selection of specimens is shown in Pl XXXI Excepting a quite insignificant number they all represent either humped bulls or are busts of the 'goddess Among the exceptions are two horned rams of which Mehi I 9 6 is shown in Pl XXVIII and the smaller one Mehi III 8 2 painted with stripes to represent the fur in Pl XXXI We have an interesting piece of modelling in Mehi II 2 7a (Pl XXXI) which shows a dog astride the broken rim of what was a bowl or pot What animal head the coarsely worked fragment Mehi III 6 15, with holes for eyes and ears was meant to represent is uncertain Of humped bulls the collection contains no less than 199 specimens (146 from II IV 43 from I and 10 from the surface) varying from less than 2 inches to about 4 inches in length A still larger number of fragments were too much injured to deserve removal Not a single piece was found intact which seems to justify the conclusion that these figurines had all been thrown away because they were incomplete and hence unfit for ceremonial use

Significance of bull figurines—Considering the numbers of these representations of the humped bull and the uniformity of the type throughout all chalcolithic sites of Makran and Jhalawan it seems difficult not to believe that this animal was like its Indian counterpart the 'Brahmani bull' an object of popular reverence if not of actual worship If this assumption is right the temptation is obviously great to seek some connexion between that prehistoric worship of the population which occupied the extreme western marches of India before the 'Aryan invasion of Vedic times and the great role played by Śiva's bull in Indian cult from a very early historical age There is scarcely any indication of such a cult to be found in the oldest Vedic literature This might lead us to infer that it was an inheritance from much earlier times to which the autochthonous population of northern India with its deeply rooted archaic beliefs has clung notwithstanding the great transformation brought about in its civilization, racial constitution and language by the triumphant invasion of its northern conquerors But the subject touched upon is too wide and at present still too speculative to be pursued here further in what is meant for a plain record of antiquarian facts

Figurines of 'goddess—Problems quite as interesting are raised by the female figure of which not less than 92 specimens in varying states of preservation were brought to light in the course of our trial excavation at this site For the sake of convenience I have referred to her as the goddess I think it may be taken for certain that all the figurines of which Pl XXXI reproduces a score of typical specimens are intended to represent a female for though the breasts so prominent in the pieces less elaborately decked with ornaments,

like III 11 4 17 I 4 5 III 5 1 3 3 are not shown in others yet the presence of the same elaborate *coiffure* with long tresses is sufficient to mark the sex Throughout we observe the identical and very archaic treatment of the face which is almost bird like and also where enough of the figurines is preserved the same pose of the hands placed against the breast or waist

It is important to note that here as in the case of all representations of the goddess found at other sites the figurines whenever their lower portions survive, invariably end below the waist in a flat base This proves that all of them were meant to be set up presumably on some stand or platform Variety is intro duced mainly in the treatment of the hair dress and of the ornaments around breast and neck Obviously the ancient modeller found it easier to work on such details in the flat Particularly ornate jewellery is shown *e g* by III 6 17 7 1 5 3 2 2 II 10 2a No indications of dress are attempted for the folds sometimes seen on the arms as on III 2 2 5 1 are probably meant to represent armlets Just as in the case of the humped bulls all figurines of the goddess were damaged in antiquity often lacking the head arms or lower portion of body Curiously enough the only almost perfect specimen III 6 16 only slightly damaged in the face is one of those found on the burial deposit of ashes and bones described above

Representation of mother goddess —I have already before given expression to the surmise that these figurines of which rare but closely correspond ing specimens had been found also at the chalcolithic sites of Zhob may have been meant to represent a female divinity of fertility the mother goddess whose worship meets us in widely distant parts of Asia and Europe throughout historical times The fact that we have found her at the Kulli site shown once with a babe in her arms may lend support to this conjecture [3] But the close connexion which in early mythological belief often appears between that mother goddess and the goddess of the earth ought not to be left out of sight Whether the fact of the body of our goddess being shown in all those numerous figurines only down to below the waist offers a clue pointing in the latter direction I do not venture to assert for certain But it is certainly curious that we meet with a corresponding representation of the Earth goddess emerging from the ground with the upper portion of the body also in Buddhist and Hellenistic iconography [4]

Period of civilization represented at Mehi —Limited as the extent of the excavation work done at the Mehi mound was its results suffice to prove that the civilization of which the remains have come to light there belongs to the same period and presumably also race as the remains traced at the sites of Kulli Siah damb of Jhau and Shahdinzai and in the deeper strata of Shahi tump A close relation to the chalcolithic sites of Zhob is also evident The fact that not a single stone implement was found either at Mehi or at Kulli together with the more developed style of the painted pottery seems to suggest

See V *Bal h ≀tan Tor* Pl IX XIV

[3] Cf above p 1 6 Pl XXII

[4] Cf Foucher *L'Art du Gandhara* Vol I pp 5 7 sqq

that the occupation of these sites dates later than that of Shahi tump and the *Zhob* sites On the other hand the distinct rarity of potsherds showing the characteristic decorative features of the Nal type points to a period preceding the spread of polychrome ware of the latter type

Burial customs —The evidence furnished by the burial deposits is also instructive The practice of placing ashes and remains of bones from completely cremated bodies in cinerary vessels is identical with that observed at the chalcolithic sites of Zhob and Sultangen dor On the other hand the custom of leaving remains of partially burned corpses deposited together with personal relics at the place of cremation differs from that practice and may well mark a step towards complete interment such as is found at the later burials on the top of the Shahi tump mound and at the burial ground explored by Mr Hargreaves at Nal

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SECTION iv —REMAINS EXAMINED IN UPPER MASHKAI GRESHAK AND NAL

On the morning of March 30 I started from Mehi up the Mashkai valley On my first arrival I had already taken occasion to inspect the two dambs reported at Jebri village This itself as stated before lies only 1½ miles above Mehi amidst Karez irrigated fields One of the dambs proved a small mound, only about 16 feet high occupied on its top by the ruined fort of the Jebri Sirdars which an earthquake was said to have destroyed some thirty six years ago The circumvallation of mud bricks measures inside about 40 yards Of the few painted potsherds I picked up at the foot of the mound one shows polychrome decoration distinctly of the Nal type and thus suffices to prove prehistoric occupation

Prehistoric mound near Jebri —The second damb situated about 3 furlongs to the east of the ruined fort by the side of the *Karodi* flood bed looked at first like a small natural hillock so thickly is it covered with rough stones But remains of very primitive walls built with large unhewn blocks are laid bare where the torrent has cut into the mound at its southern foot and these prove its artificial origin The mound measures about 130 yards along its foot from east to west and circ 50 yards across its maximum height is about 20 feet Lines of fallen walls could just be made out among the confused stone heaps on the top but not a single potsherd was to be seen there Subsequently, however I came upon two fragments of plain and very coarse ware apparently hand made between the foot of the mound and a small outlier to the west Small stone blades undoubtedly worked turned up too and a short search allowed us to collect over a dozen more all showing signs of use from the slopes of the mound Together with the chert cores also found there these little stone implements seem to indicate that the spot which is now well away from water was occupied in neolithic times

Here I may mention that a fine large jar which was brought to me at Mehi was said to have been found in a field near Jebri It is 3½ feet high and has

three finely designed handles below its lip One of these bears a small flat disc as if intended for a drinking cup to be placed there The vessel is certainly of a date much later than the pottery of Melu

Damb of Runjān—About 3 miles above Jebri cultivation here all Khushkaba stops on both banks of the river bed which further up is entirely dry except after rain floods On the left bank along which the road led only a few ruined Gabar bands could be seen But on the large alluvial fan of the Gajeli kaur which descends on the opposite side of the valley dark lines of stone marking ancient embankments showed up over a considerable distance The damb of *Runjan* which I visited on the western bank of the Mashkai bed after covering about 9 miles from Melu has a length of about 220 yards from north to south with a width less than half that Its maximum height is about 20 feet What painted pottery could be seen on its slopes was too scanty to permit of any definite determination of type but some resembled the Melu ware

Suneri damb—No cultivation was met as we rode for $5\frac{1}{2}$ miles further up the valley along the stony glacis of the hills Desolate too was the look of the ground at *Suneri* where a dozen of semi nomadic families carry on precarious cultivation on the chance of flood water being received from the side valley of Mai bibu or the Mashkai bed No water for humans or flocks can otherwise be found nearer than three miles off at a spring below the Jauri pass towards Greshak Yet here we found the *Suneri-damb* a conspicuous mound rising at the mouth of the Mai bibu valley It measures about 230 yards from east to west and some 160 yards across Its height is about 35 feet The whitish clay from decayed mud dwellings is exposed over much of the upper portion of the mound, rubble and large unhewn stones cover the slopes elsewhere

Types of decorated pottery—That the site had been occupied for a long period from early down to historical times was clearly shown by the fairly plentiful painted pottery Most of it is coarse as also the plain ware By the side of a few pieces with poorly executed patterns of the Nal type the specimens collected (see Sun 1 5 Pl XXXIII) frequently show motifs with voluted scrolls, rayed discs and half circles these resemble the decoration prevailing on the painted pottery of Zayak, Spet damb of Jhau and also Jiwanri That occupation continued into the early historical period is proved by some ribbed and green glazed pieces also a fragment of good red ware with polished bands This comparatively late dating is confirmed by finds of a handle and a spout such as seen at Zangian and Jiwanri as well as by relief decorated coarse pottery of a type common at Dabar kot Yet on the other end of the time scale we find some scrapers of chert with distinct marks of usage as well as cores from which such artifacts were produced The chief interest of the Suneri mound lies in the fact of its being now so far removed from any perennial supply of water This in the case of so large a settlement as the size of the mound indicates seems clearly to point to a change in climatic conditions since the time of its early occupation

Visit to Gwani—Not having learned of any dambs' higher up on Mashkai we turned from Suneri eastwards and after crossing the wide Mashkai river bed

regained the motor track by the Jauri spring Thence the lorries carried us through narrow twisting ravines with many ups and downs across the Jauri pass into the wide valley of Gwani Here I visited the same day the damb known as *Gwani kalat* situated about 2 miles SSE from the nearest point on the motor road All the way we passed abandoned Khushkaba fields and others recently tilled where the wheat crop had completely withered No rain had fallen for over half a year and here as well as in the similarly situated tracts of Greshak and Nal the hopeless prospect of a harvest had driven most of the people away to Sind or down towards Las Bela At Gwani kalat a small ruined fort crowns the top about 40 yards across of an ancient debris mound circ 25 feet high The painted pottery found on the slopes comprises the same types as at Suneri damb Here too scrapers and cores of chert were picked up while decorated glazed potsherds of the same kind as found at the Sohren damb of Awaran attested occupation continued down to mediaeval times

Mound of Jawarji kalat —From Gwani a ten miles drive over an open and almost imperceptible watershed quite as desolate in appearance carried us by nightfall well into the broad valley of *Greshak* There we halted near the hamlet of Jawarji and thanks to a fresh Gurich and the increased elevation enjoyed a delightfully cold night Next morning I visited the mound of *Jawarji kalat* close to the little hamlet which with its untilled fields and decayed mud built dwellings strikingly illustrated the plight of this poor ill favoured tract The mound which a small ruined fort crowns rises to about 20 feet in height and measures at its foot circ 110 yards from east to west and some 70 yards across The few painted potsherds found here pointed to occupation approximately contemporary with that of Suneri damb

Mound of Saka kalat —A site of greater importance and also greater antiquity is marked by the double humped mound of which the smaller southern knoll bears the ruined fort of *Saka kalat* It rises over a flat expanse of bare clay about 3 miles to the north of Jawarji The little stronghold measuring inside about 36 by 30 yards is of modern origin having been built by Saka Khan about four or five generations ago But an inspection of its walls was all the same instructive They are built with layers of small stones inserted between courses of mud bricks or stamped clay Assuming construction of the same rough kind in the dwellings of the Mehi site we can easily explain the presence of abundant rubble in the debris which had accumulated from decayed structures at the area II III of Mehi before it became a dumping ground for broken pottery etc and a place for depositing remains of cremated bodies

Types of painted pottery —The whole mound has a length of about 260 yards from north to south and at the saddle which divides the northern and longer portion from the southern one is about 170 yards wide Its maximum height is about 30 feet Painted pottery is to be found on the slopes in fair numbers and its varied types point to occupation at different prehistoric periods Patterns in black on a dark red slip like Saka 1 3 (Pl XXXIII) among which we have the figure of a bull distinctly recall the painted ware of Kulli and Mehi More numerous are pieces like Saka 4 where hachured motifs or scrolls are shown in

brown over a buff or whitish ground These motifs are clearly derived from *the black on red ware and belong to a later period* as is shown also by the coarser execution That the early occupation of the site goes back to that of the Mehi damb is proved by a fragmentary bull figurine and a small terracotta piece representing the arm of a goddess I observed no traces of structural *remains on the surface but believe all the same that the Saka kalat mound* deserves a trial examination Owing to the absence from Greshak of almost the whole population it would not have been possible at the time to collect adequate labour

The Nal tract—*The northern portion of the Greshak tract drains into* the flood bed of the Gidar dor which itself is the main feeder of the Nal river eastwards A drive of 18 miles by a tortuous track through a wildly broken hill chain brought us the same day into the wide trough of Nal from which *that river already met by us about Jhau derives its designation* The Nal tract comprises an open stretch of alluvium some six miles across from east to west which the north eastern feeders of the river have deposited above their junction with the Gidar dor It is hence one of the main cultivable areas *of Jhalawan At Nal village situated close to the western edge of the area* and the seat of the chief Sirdar of the Bizanjau clan a fine spring issues below a rocky spur and together with a single Karez provides irrigation for a limited patch of ground But everywhere else cultivation is wholly dependent on rainfall *As this for a succession of years had been very inadequate and since* the summer preceding my visit had altogether failed we found most of the arable land untilled and the homesteads in the scattered hamlets with rare exceptions abandoned Judging from what my stay for two nights at Nal village and a long day s ride extending over the whole length of the tract from north to south allowed me to observe I should have found it difficult to credit it at the time with more than perhaps one tenth of the population over 2 000 which the Census of 1920 1 recorded

Previous exploration about Nal—That Nal must have been a locality of some importance in ancient times is proved by the number of dambs to be found at different points But the largest of these the one known as *Sohr damb* had been the scene of prolonged systematic excavations conducted by Mr H Hargreaves in May June 1925 and most of the rest surveyed by the same officer or his assistant K B Wasiuddin Khan So I could confine myself to an inspection of the Sohr damb and to a rapid survey of a few minor sites of which no mention is made in Mr Hargreaves full and very instructive report on his operations at Nal[1]

Sohr damb of Nal—This report makes it unnecessary here to give any general description of the great mound of Sohr damb situated amidst fields close on five miles to the east of Nal village or of the structural remains left *in situ* at the small but very interesting necropolis which Mr Hargreaves pains taking exploration has laid bare at the north western foot of the mound

[1] Cf *Annual Report of the Archæological Survey of India* 1925–26 pp 60 72

Still less can it come within my scope to attempt any analysis of the characteristic style of the painted funerary pottery of which many fine and well preserved specimens were recovered then A full description of these may be *expected in a separate publication under preparation* by Mr Hargreaves Meanwhile the account and illustrations given by Sir John Marshall of the 59 pieces which some amateur digging done here in 1903 had brought to light together with the reproductions of some of Mr Hargreaves finds will suffice for reference "

Painted ware from surface of mound—But as I had so often occasion in the preceding pages to refer to painted pottery of the Nal type found elsewhere in the course of my surveys it may be useful to note some observations I was able to make on my brief visit to the classic site of its first discovery In the first place it deserves to be pointed out that as also observed by Mr Hargreaves fragments of painted ware showing the characteristic patterns of the Nal type with curved or polygonal lines executed mostly in dark brown over a light buff or yellowish slip (see for specimens Nal 7 12 Pl XXXIII) *are to be found* plentifully over the whole mound This measures over 330 yards in length Their close agreement in make and in patterns with the funerary ware from Mr Hargreaves necropolis Area I is seen on comparing those specimens with others found lying in the excavated area and illustrated by the specimens Nal 1 6 (Pl XXXIII) That the fragments of this ware picked up elsewhere on the surface of the mound do but rarely retain clear evidence of polychrome treatment (as in Nal 21) is probably due to the prolonged exposure they have undergone on the surface

Pottery other than of 'Nal type—The great abundance of this painted pottery all over the mound is clear proof that it was in extensive domestic use and not confined to funerary purposes and *further that it must* have been manufactured during a prolonged period Exactly the same observation applies also to the 'Nal type pottery found at the Siah damb of Mundara Fragments of superior body showing simple geometrical motifs on a fine dark red slip, such as Nal 19 22 could but very rarely be found low down on the undisturbed eastern and southern slope of the mound In view of the observations made elsewhere I believe them to belong to the earlier deposits of the site Pieces like Nal 18 19 with coarsely executed patterns in black over terracotta ground or slip may possibly be later than the Nal type pottery A few pieces of this kind (Nal 17) were however found mixed with fragments of the usual 'Nal type like Nal 23 24 *which were extracted from exposed* layers of the cutting made by Mr Hargreaves excavation at the southern end of Area I From this cutting come also Nal 13 14 The former of these *fragments* is *of* interest as it shows the well drawn head of a bull, distinctly

[1] For Sir John Marshall s account see *Annual Report Arch Survey of India* 1904 05 p 10 Pl XXXIII XXXIV for preliminary illustrations of Mr Hargreaves finds, see Annual *Report* 1925 26 Pl XIII XV

The Medal o Museum at Quetta contains a fairly large collection of well preserved funerary ware from the Sohr damb These apparently are part of the plentiful finds made during the extensive operations which were carried out here in 1908 by Officers of the Hazara Pioneers Other specimens are the result of local amateur digging

superior in design to the clumsy representations of humped bulls found on the painted pottery of Kulli and Mehi where the heads have mostly a very queer look suggesting those of a beetle Finally I may note that the total absence among the potsherds collected on the surface of any glazed or ribbed ware together with the fact of no painted pottery of the Suner type having come to my notice there strongly supports the assumption of the mound having remained unoccupied since prehistoric times To the close agreement in the size of the mud bricks cleared by Mr Hargreaves at the Sohr damb [3] and those found at Siah damb Nundara and on the top of the Shah tump mound I have had already occasion to refer [4]

Shakar Khan damb—A few smaller dambs which were visited by me about Nal do not appear to have been surveyed before They lie almost all along the western side of the valley The one shown to me under the name of *Shakar Khan damb* proved a natural hillock situated about a mile to the north east of Nal village It is about 90 yards long and less across Along its top rising about 18 feet above the level of the adjacent fields a massive wall foundation 20 yards long could be traced Former occupation is marked by scanty fragments of coarse pottery as well as by flakes and cores of chert To the north lie a few Khuskaba fields with a modern earth dam intended to catch for their benefit the drainage from a stretch of low ridges to the west Parallel to this dam runs a ruined Gabar band which starts from the north eastern foot of the hillock and obviously served the same purpose Wall foundations built with large boulders can be traced also on a second somewhat higher natural hillock about two furlongs off to the east

Shari damb—Proceeding 2½ miles further to the north east along the foot of low outlying ridges the large *Shari damb* was reached It rises between the wide flood bed of the Ushtiri Laur on the west and the fields of Shari hamlet eastwards Its central portion which probably rests on a natural knoll shows a height of about 37 feet Below this there lie both to the south and north artificial terraces of which the outer edges are built up with walls of large undressed stones to a height of about 15 feet above the level of the fields The width of the whole mound along the northern terrace is 95 yards and its length by the side of the flood bed about 105 yards Most of the painted pottery found here shows geometrical patterns of the same type as at Suneri and Spēt-damb Jhau executed in black or dark purple over a red slip Voluted scrolls and rayed circlets as seen in Shari 1 2 Pl XXXIII are prevailing motifs It was of special interest to note a small 'Gabar band projecting from the north eastern corner of the mound along the edge of the nearest fields It is *built in exactly the same way as the supporting walls of the terraces of the* mound and probably dates from the same late prehistoric period

When subsequently proceeding from Sohr damb for a mile to the south west I found painted potsherds of the same type also on the small mound of

[3] See for c f pp 68 0

[4] Cf above p 14?

Lehri already described by Mr Hargreaves[5] At the small *Hanal damb* too which I was shown some 2 miles further on in the same direction painted fragments of the Suneri type could be picked up This mound only 10 feet high and some 30 yards across is adjoined by a few huts while most of the once cultivated ground around is now overrun by tamarisk scrub

Plateau of Hāla damb—A ride of 5 miles continued to the south west over ground of similarly desolate look brought us to the gravel covered alluvial fan of the Gidar dor Close to where its wide flood bed is joined by the drainage of the main Nal valley there rises on its bank a low plateau known as *Hala damb* This extends for circ 180 yards from north to south with an average width of about 150 yards Its height above the gravel peneplain is about 25 feet The whole area is of very unequal surface and is covered with rubble of small stones and in places with rough enclosures formed of large boulders What scanty pottery could be found on the surface is all of very coarse make the few painted pieces showing only plain black bands or simple zigzags The period of occupation could thus not be determined

Hillock outside Nal village—On the morning of April 2nd before starting on the journey to Khozdar I inspected a small eminence which being about two furlongs from my camping place outside the north eastern edge of Nal village had attracted my attention It is obviously a natural hillock half buried by detritus washed down from the hillside to the west That it was once occupied was soon proved by plentiful potsherds found on and around it Most of these were coarse plain ware with a whitish surface reminding me at once of the pottery which we had found at the burial cairns of Tiwanri Nasratabad, etc and also of Moghul ghundai in Zhōb The conclusion as to this ground having been occupied in historical times was fully confirmed by fragments of glazed ware some unmistakably mediaeval which were also picked up Near the little hillock which measures about 150 yards in length low circular stone heaps only 3 4 feet in diameter manifestly marked burial deposits The two opened contained under a thin layer of earth small fragments of calcined bones and potsherds of the same coarse make with whitish surface just referred to

Considering the importance which must at all times have attached to the fine spring now irrigating the gardens and orchards of the Bizanjau Sirdar and his relatives it may safely be assumed that the site of Nal village has been occupied since early times But owing to extensive modern refuse layers around its crowded houses and to the close cultivation no definite evidence could be traced without excavation I may however mention that from the bare ground towards the spring there were brought to me the fragment of a bull figurine and a piece of mat marked pottery both undoubtedly prehistoric

'Gabar bands' near Laghor zard—The small site of *Laghor zard* which the motor road to Khozdar passes about 5½ miles from Nal village has already been described by Mr Hargreaves[6] From the foot of the small rocky hillock

[5] See *Annual Report A S I* 19— —, 01

[6] See loc cit pp. 60 61

which it occupies two lines of 'Gabar-bands' strike off at a distance of 310 yards from each other. From the first, which the road cuts through, three transverse 'bands' diverge at right angles on different levels, forming three successive terraces. The purpose of these stone-faced embankments was here obviously to facilitate the uniform retention of rain water on the terraced plots and the deposition of fertile alluvium on the otherwise rocky soil. No other remains of this kind were passed on the drive over some 32 miles which carried me to Khozdar, first through a much broken hill range and then down the open valley drained by the Kalnak river.

CHAPTER X.—ALONG THE CENTRAL VALLEY OF JHALAWĀN AND SARĀWĀN

SECTION 1.—REMAINS OF KHOZDAR AND WADH

The narrow tract of Khozdar on the upper course of the Kulachi river owes such importance as its repeated mention in early Arab historical and geographical records implies far more to its central position than to its size or local resources.[1] In Khozdar the main routes leading from Sind to Makran and southern Persia are crossed by the most direct line of communication connecting the south-eastern portion of Afghanistan, Pishin and Kalat with the sea coast. Khozdar besides enjoys the great advantage of ample irrigation from the Kulāchi river. This permits of rice cultivation and at the same time, together with the suitable elevation of about 4,000 feet, favours fruit growing.

But owing to the confined nature of the valley the area over which the available water can be utilized for cultivation is very limited when compared with the tracts to the west where arable ground is extensive but its produce wholly dependent on a precarious rainfall. This also explains why Khozdar notwithstanding those advantages maintains only a population of a little over a thousand. It is however easy to understand that the existence of this pleasant if modest oasis, conveniently situated just at an important cross road, must always have attracted special notice on the part of those whom trade, travel or military operations caused to cross the surrounding barren regions.

Site of Gumbat.—With these observations agrees the absence of any large mounds such as are to be found in the far less favoured tracts of Kolwa, Jhau or Nal. The site known as the 'damb' of *Gumbat* was the first to which my inspection of reported 'dambs' led me on April 3rd. It proved a low hillock situated between the road and the river bed about 4½ miles above the modern fort of Khozdar. An area measuring about 200 yards from north to south and circ. 150 yards across is thickly strewn here with rubble from decayed dwellings. That

[1] Cf. *Jhalawan Gazetteer*, pp. 34 sqq.

it was a place occupied during the Muhammadan period is proved by plentiful glazed potsherds including pieces with polychrome decoration manifestly mediæval. A few fragments of black-on-red ware seem, however, to indicate that the locality was inhabited already before, probably in late prehistoric times. About 300 yards from the southern end of this débris area stands the ruin of a domed Muhammadan tomb; this accounts for the name *Gumbat* applied to the site. The structure forms a square of 28 feet outside and shows four flat pilasters on each side. It is built with hard bricks measuring 10 × 7 × 2" and carries its dome inside on four arched niches, not squinches. This ruin together with the débris of burnt bricks from other structures near by leaves little doubt about this 'Gumbat' being the 'old building' north of Khozdar to which Masson's itinerary refers as likely to have been a mosque.[1]

Remains at Kand and Kahnak.—A short distance lower down large springs issue in the river-bed, which higher up is dry; their water is taken off into four canals and serves to irrigate the riverine belt down to the village of Sorgaz. The hamlet of *Kand* is the first on the right bank to receive irrigation. Just above it the extremity of a low ridge bears near the road a Muhammadan graveyard and at its eastern end the decayed walls of a small ruined fort occupied down to the middle of the last century. Judging from the plentiful glazed pottery, some with coloured designs, which strews the ground, the site appears to have been inhabited in mediæval times. It is obviously the 'considerable tappa or mound' which Masson, in a passage quoted by Mr. Hargreaves, briefly describes.[2]

Turning up the road leading to Nal I visited also the bold rocky ridge situated about $1\frac{1}{2}$ miles from Khozdar fort and known as *Kahnak* from the river-bed which passes its foot. The scanty potsherds found on its top are, with the exception of one mediæval glazed piece, of coarse make and of uncertain age. They suggest that the precipitous isolated ridge may have served at times as a safe place of refuge.

Mound of Chimri.—Probably the oldest site of Khozdar is marked by the *damb* known as *Chimri*. It lies on the left bank of the river-bed, about a mile to the east of the Khozdar fort, close above the pleasant little village of Kurd. The mound, about 30 feet high, stretches for some 200 yards from north to south with a maximum width of about 150 yards. Its top shows small ridges and hollows covered with rough stones, evidently the remains of dwellings. Most of the potsherds mixed with this débris are of coarse plain ware. But on the slopes there could be picked up also small fragments of painted pottery showing either the Nal type of decoration as seen in Chim. 1 (Pl. XXXIII), or else patterns in black on a dark red slip (Chim. 2), such as are found on the late prehistoric painted pottery from Makran and Mashkai sites. The curious little fragment Chim. 3, which shows two fox-like animals face to face, may, judging from the colouring and make, belong to the period of the Nal pottery.

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[1] See Masson, *Journeys in Baluchistan*, etc., ii, p. 44.

[2] See Masson, *Journeys*, ii, pp. 43 sq.; *Annual Report*, A. S. I., 192[illegible], p. 34.

Site of Miri but.—The best known of the 'dambs' of Khozdar is the site of *Miri but* on the right bank of the river and about 2 miles to the south east of the Khozdar fort. There a rocky outlier of the hill chain to the south of the Kahnak bed juts out towards the latter's junction with the river. It ends in three rocky hillocks; the easternmost and lowest of these rises abruptly above the reed beds lining here the banks of the river. Some bold rock pinnacles rise on the edge of this hillock, and a little plateau below them bears much decayed remains of a Muhammadan domed tomb built with mud bricks and also of some structure of burnt bricks. On another detached little hillock to the north west confused heaps of burnt bricks probably mark the position of more Muhammadan tombs. Both these kopjes appear to have enjoyed some sanctity in early Muhammadan times and hence been chosen as burial grounds.

Polychrome mediæval pottery.—Glazed potsherds, both in plain turquoise blue and polychrome, are scattered in plenty over the hillocks. Pl. XXXIII reproduces typical specimens (M. but 1–7) of this fine decorated ware which resembles that of the Sohren damb of Awaran and probably is mediæval. In M. but 8 a light blue glaze is applied over a relief pattern on the outside. Browns, greens and yellows are the prevailing colours applied for the decoration of the inside of cups and bowls. It is interesting to find this glazed ware associated with painted pottery which shows coarsely drawn geometrical patterns (M. but 9) executed in dark red or purple over buff ground. This helps approximately to date this painted ware which has been met with also at certain late sites of Loralai and Pishin. A neatly incised arabesque design is seen in M. but 10. Potsherds of the kinds just described are found, though more scantily, over the slopes of the hillocks and the rocky plateau below them for about 500 yards to the NW. of the domed tomb, but no painted pottery of the prehistoric types. That the burnt bricks, if not some of the glazed pottery too, were produced on the spot is shown by the remains of a brick kiln found about 400 yards from the 'Gumbaz' below the edge of the plateau and near a rice field.[4]

Remains above Nullah to West.—The rocky plateau bearing the kopjes drops steeply at its western end towards a narrow channel which separates it from the stony glacis of the hill chain beyond. This Nullah contains springs fed by subsoil drainage from the Kahnak bed. In it flood water descending this bed is diverted from the irrigated land along the Khozdār river and conducted towards Ubian and other hamlets further down without causing damage. The channel looked to me in places as if artificially cut. Remains of rubble built dwellings can be traced along the scarp of the plateau where it is edged by this Nullah. About the middle of this line is found what looks like the former approach to a place for ablutions or for fetching water. The walls are carefully built with burnt bricks and stand to a height of 2 feet; the two which jut out at right angles to the bank of the channel, here 10–12 feet deep, are each provided with a pro-

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[4] This kiln was already noticed by Mr R. A. Gupte of the Ethnographical Survey who accompanied Mr Hughes Buller in 1903; cf. *Jhalawan Gazetteer*, p. 60.

jecting step 5 inches wide These steps are found only a few inches above what seems the bottom of the channel The wall complete on the side towards the plateau, is 8 feet long and reached by descending the scarp the other two walls at right angles to it are broken at about 6 feet from the corners It is of course possible that these walls belong to some earlier structure built some 8 feet below the level of the rest, but considering their brick material which is the same as found among the ruined tombs towards the other end of the plateau this does not seem likely

Here I may conveniently mention that on the morning of my departure from Khozdar April 8th there were brought to me a number of glazed potsherds most of them polychrome said to come from *Genu damb* a locality down the left bank of the river They all resemble the decorated ware of Miri but in their patterns, as seen from the specimens Geni 1 2 Pl XXXIII The arrangements already made for my visit to Baghwana did not allow me to examine the reported find spot

Visit to Zidi —On the morning of April 4th I proceeded down the left bank of the river to where the valley eastwards widens into a large amphitheatre of gently sloping ground The whole area is known as *Zidi* Owing to good drainage from the surrounding high hills and to irrigation brought by a canal from the river it supports a comparatively large number of hamlets Mum the chief village stands in the middle of marshy meadows where three small hillocks, apparently all natural rise close together like islands Two of them are occupied by dwellings while the third which had been reported to me as a damb bears the decayed walls of others supposed to have been abandoned some four generations ago The hillock rises to about 40 feet and has a diameter of over 120 yards at its foot No ancient pottery could be traced on its slopes About a mile to the south there is found a small mound known as *Boluka damb* not far from the Ziarat of Kamal shah a well known pilgrimage place The mound rises to about 15 feet above the marshy meadows and rice fields which surround it and extends for circ 150 yards with a width of about 60 yards It bears the remains probably of no great age of dwellings built with rubble and mud Among the plentiful plain potsherds of coarse make only one or two small painted pieces could be found these afforded no definite indication as to the period of earlier occupation

Move to Wadh —Though Zidi is fully 14 miles from Khozdar fort tracks practicable for motors allowed me to return to Khozdar in time to do from there on the same day the journey of some 45 miles to the centre of the Wadh tract Wadh lies on a wide plateau to the south west where the main feeder of the Porali river flowing down to Las Bela gathers its drainage The route which passes through it from the side of Khozdar must since early times have been a main line of communication between Kalat Las Bela and the sea coast Masson too followed it twice The route now made practicable for motor as a 'fair weather road as far as Drakalo passes first up the tortuous valley of the Saman an affluent of the Khozdar river and then enters the open basin at its head known as Wahir

Enclosures near Wahir—There at a distance of 22 miles from Khozdar I noticed by the side of the road two cairns of the type first seen near Gabar bands on the way to Malar[5] and on the opposite side of the road three circular enclosures All around stretches for miles a bare waste of stone and gravel without habitations of any kind The circular enclosures touching each other stretch in a straight line from SE to NW and show each an average diameter of about 14 feet They are formed by double walls of large rough stones set in two or three courses and about 4 feet apart the space between them being filled with gravel The walls stand nowhere to a greater height than three feet or so and there is no trace of their ever having carried any superstructure Each enclosure has its entrance from the south east there being a kind of elliptical passage about 2 yards wide between the first from that side and the second These enclosures distinctly differ from the roughly laid out circles of single stones which are often seen in these hills and in accordance with a Brahui custom mark places where marriage processions have halted to perform a dance There is no local tradition about the spot and nothing was observed to afford a clue as to the age of these enclosures Their arrangement curiously recalled to me that seen at certain megalithic sanctuaries of Malta but this similarly is probably quite illusory There is nothing megalithic about the blocks of stone, though they are large enough for their transport from the foot of the hills nowhere nearer than a mile or two to have implied trouble Of the two cairns on the east side of the road both about 10 feet in diameter and 6 feet high one was cleared by us to the ground level It proved to be faced outside with large undressed stones set without mortar or clay and to be filled inside with rubble and gravel

Remains on ridge E of Wahir spring—Here I may conveniently record also what I observed at an undoubtedly early site found about three miles further to the west I could not visit it until April 7th on my return journey There at a point circ one mile to the east of the spring and main hamlet of Wahir a rocky ridge juts out from the stony glacis of the hills which encircle the plateau on the north It stretches at its foot for about 380 yards from east to west and measures there 300 yards across It rises about 35 feet above the level of the glacis at its northern foot The top of the ridge is fairly level over an area of about 40 by 30 yards This as well as the slopes which are broken in places by small terraces are covered with stone debris from decayed dwellings and with fragments of decomposed rock Both on the top and on the lower terraces remains of stone built walls crop out here and there Among the plentiful potsherds which mingle with the debris painted fragments of several types can clearly be distinguished By the side of numerous small fragments unmistakably of the Nal type (*see* Wah 1 Pl XXXIII) there are found less frequent pieces of black on red ware like Wah 3 (*see* Pl XXXIII) These show equally clearly patterns familiar from Kulli and Mehi Others like Wah 2 seem to belong to pottery of the late prehistoric type That the ridge was occupied from an early period is suggested by the plentiful chert cores and flakes One of the

[5] See above p 114.

latter looks as if used as a primitive arrowhead. No glazed pottery or other objects suggesting occupation during historical times were found. No water is to be found now nearer to the ridge than the above-mentioned spring. But permanent drainage from the valley to the NE. may have passed once in the bed which skirts the eastern foot of the ridge.

Tract of Wadh.—From Wahir there is reached over a low watershed the tract known as *Wadh* and held by the once powerful tribe of the Mengals. It comprises the basin, some 8 miles across where widest, in which the head of the Porali river gathers its drainage. Except after heavy rain the torrent beds which feed it are dry, and all the cultivation, which is limited in extent, is 'Khushkaba'. The vagaries of the flood-beds descending into the basin are apt to interfere with Karēzes for the construction of which the configuration of the ground would otherwise offer facilities. Thus the wide stretch of fertile alluvial soil which was once cultivated around what was the fortified seat of Shakar Khan, the leader of the last Mengal rebellion, has become a scrub-covered waste, for the Karēz named after Sirdar Nūruddin Mengal has fallen in owing to a heavy flood some seven years ago.

Site of Panju.—It was across this desolate plain that my visit on April 5th to the 'dambs' of Wadh first took me. It was carried out under the guidance of Rissaldar Khan Muhammad Mengal, the capable commander of the local Levies and familiar with all localities of the tract. Leaving the rest-house near the Levy post and riding for about 3 miles to the north-west we reached the area known as *Panju-damb*. It proved the small counterpart of a Turkestan 'Tati', being overrun by little dunes of drift sand and thickly strewn with potsherds wherever the slightly eroded ground is exposed between them. The area marked by this débris measures about 550 yards from north to south and about 300 yards across. Corrosion by wind-driven sand has entirely effaced the patterns on most of the pieces once painted. But on those, all small, which retain them, designs of the late prehistoric type executed in black and purple over red or buff ground are recognizable. The site was said to be searched after storms for beads and other small antiques, but only a small glass bead could be picked up by us.

Ridge of Abdul-but.—The Panju-damb lies not far from the bed of the Tul river, the main feeder of the headwaters of the Porali, and proceeding up this bed to the north-east quite a series of other small sites was reached. The first, *Abdul-but*, situated at a distance of about 1 miles, is a rocky ridge rising to a height of about 20 feet. There are scanty traces of rough stone walls together with rare pieces of pottery to be seen along the top, which stretches for c. 170 yards from NE. to SW. Among the pottery there were found a few painted fragments of the late prehistoric type as well as some of glazed ware. Chert and flint cores and flakes were picked up in abundance. Most of the flakes show clear evidence of prolonged use, and the early occupation of the site is thus proved. Of the several small stone circles found on the top one was opened. It contained small fragments of burned bones, obviously a burial deposit of later times.

Site of Kāshum-damb —A site of some interest is the *Kashum-damb*, situated about three quarters of a mile to the north on the right bank of the Tuk There a natural ridge rises about 20 feet above the flood bed and for a distance of some 190 yards from its southern end bears what looked like foundation walls of rough stone work Some apparently belonged to structures of some size At the northern end of the debris strewn portion of the ridge the remains of a wall, 10 feet thick, stretch across the top It is built with large undressed stones and seems to have served for defence Among the plentiful potsherds a number show painted patterns of the Nal type But far more frequent are fragments of glazed ware (Kash 1, Pl XXXIII), mostly with polychrome patterns of mediæval look It deserves to be noted that no painted pieces with patterns in black on red or buff of the late prehistoric type could be found here

Remains above Sōrak —Proceeding about 1¼ mile to the ENE and crossing and recrossing the Tuk bed we reached some 'Khushkaba' fields belonging to the hamlet of Sōrak by the side of an abandoned Karēz Above them rises a very steep ridge which at the southern end of its narrow crest, about 120 feet high, bears ruined stone walls of the roughest kind for a distance of some 50 yards On the slope to the south a small shoulder is covered with similar remains What painted potsherds could be found all show black geometrical patterns of 'late prehistoric type' (*see* Sorak 1,2, Pl XXXIII) on red or buff ground Similar painted ware was to be seen also among the debris of some rubble built dwellings near the fields at the southern foot of the ridge Neither pottery of the Nāl type nor glazed pieces were found here, but a chert core from which 'blades' had evidently been chipped

Other remains of Wadh —About 1¼ mile to the south west of Sorak and not far from the left bank of the Tuk bed, there rises a precipitous kopje of bare rock to a height of about 80 feet above the alluvial ground here showing some cultivation Its top, about 30 yards in diameter, bears potsherds of glazed and decorated ware, manifestly mediæval, with rare fragments of 'late prehistoric' ware (Jog 1, Pl XXXIII) Riding through a gap in the low hill chain to the south I next visited a small mound situated about half a mile to the ENE of the Wadh rest house The ground around now a desolate waste, is crossed by the abandoned Karēz of Sirdar Nuruddin An area of about 200 by 120 yards shows here potsherds of glazed as well as of coarse black on red ware amidst traces of stone wall foundations. Finally when inspecting a low rocky ridge, half a mile SSE of the Levy post, known as *Haji Abdullah damb* I convinced myself that the only remains to be found on it are the debris of burned bricks from a completely wrecked Muhammadan tomb

Route through Riku —On April 6th my survey was extended from Wadh still under Rissaldar Khan Muhammad's guidance, to the Drakalo tract south westwards This is the last area with some cultivation before reaching the border of Lās Bēla As far as the hamlet of Drakalo, some 18 miles from Wadh, it was possible to use the motor track which ends there Where the Porali and the route by its side pass between small rock islands, outliers of the hill range which divides Wadh from a small subsidiary basin known as Riku, I

visited the rocky hill known as *Kasim dad-gatti*. It rises very abruptly above rice fields at its foot irrigated from the Porali. Its top at a height of about 250 feet bears remains of decayed stone walls over an area of about 40 yards in diameter as well as debris of a completely destroyed Muhammadan 'Gumbaz' built with burned bricks measuring 9½"×6"×2". The scanty pottery found all looked late. The very steep hill had evidently served only as a temporary refuge. A small rocky knoll known as *Koch a b t* about half a mile to the south was also inspected. It is about 30 feet high and scarcely more than 60 yards in diameter. Former occupation is marked only by coarse plain pottery of uncertain character. Another small rocky eminence away to the south east at the foot of the hills through which the Porali has cut its way was pointed out to me under the name of *Hassan damb*. It lay too far off the route and could be clearly recognized through the binocular as a natural formation, hence I left it unvisited.

The Drakalo basin.—On the low divide towards the Drakalo basin we passed numerous large rings laid out with stones on the occasion of Brahui marriage processions and known as *chap jagas*. A small cairn close to them, about 3 feet high and 7 feet across, proved on examination to contain only stones and earth. My Brahui companions were obviously right in taking it for a *chedak*, i.e. a cairn set up according to their custom in commemoration of a person who dies without issue. A drive of seven miles hence across the Drakalo basin, which shows very little cultivation but plentiful jungle, brought us to its principal hamlet. *A small rocky ridge jutting out from the hill above it bears on its narrow top and on its western slope remains of massive walls which look ancient.* They are built with large undressed blocks of calcareous sandstone set roughly in courses and survive to a height of 2-3 feet. The top of the ridge close on 200 feet in height measures about 60 by 18 yards. Among the scanty painted pottery found here some show patterns, black on red, of late prehistoric type such as found at Suneri and Spet-damb Jhau, while two are distinctly of the Nal type.

Hillock of Aidu damb.—About 1½ miles to the south of Drakalo hamlet and near to where the small side valley of Belar debouches there rises a small conical hillock to a height of about 120 feet. It is known as *Aidu damb* and on its top, circ. 20 yards across, is occupied by modern Sangars. On its slopes walls *built with large undressed blocks of stone* brought from the hillside opposite, support terraces which seem to have been occupied by dwellings. On a terrace to the east the wall foundations of structures of some size could be traced. Among the painted pottery found here the majority show patterns of the 'late prehistoric' type as above noted, but a few black on dark red fragments of superior make as well as a fragment of perforated plain ware may well be of earlier origin.

Mounds up Belār valley.—On proceeding up the Belar valley, clothed with plentiful jungle, I was shown first the *Haj Mula mal-damb* about 2 miles in a direct line to the SSE of Drakalo hamlet. It is a small mound entirely of artificial origin with rubble covering its slope. Its top measures about 20

yards in diameter and stands to a height of circ 12 feet The painted pot sherds all show black on red patterns of the Suneri and Spet damb type voluted scrolls prevailing Specimens of the same late prehistoric ware were found also at two nameless mounds visited further to the south west in the Belar valley The first some 300 yards from the one last mentioned is only 8 9 feet high and measures about 150 yards in diameter at its foot Here were to be seen also some glazed fragments with polychrome decoration The second mound which is some 500 yards further away and close to the road rises to about 25 feet and measures at its foot circ 140 by 90 yards The painted pottery found here shows the same slight variations of late prehistoric ware as at Aidu damb a specimen with a voluted scroll Belar B 1 is seen in Pl. XXXIII

The same day I returned to Wadh and on the following day was back at Khozdar in time for Kahmullah Khan the helpful Deputy Wazir of Southern Jhalawan to make all needful arrangements ahead for my survey of sites on the way to Sorab

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SECTION ii —BAGHWĀNA MOUNDS AND THE GABAR-BANDS OF LĀKORIAN

On the morning of April 8th I left Khozdar for the large valley of Baghwana due north Proceeding up the Khozdar river I was able to inspect an Arabic rock inscription found close to the road about 9 miles from Khozdar fort It proved to contain the Kalima the Muhammadan confession of faith in Kufic characters and is obviously identical with the one noted in the Gazetteer as having been ascribed by Dr (now Sir) Denison Ross to the 4th or 5th century of the Hijra

Valley of Baghwana —About a mile beyond an easy defile gives access to the open valley trough of Baghwana This stretches mainly from east to west with a length of about 12 miles and a maximum width of over 6 miles Extensive areas of Khushkaba cultivation account for the considerable number of hamlets scattered over the valley But owing to successive years of insufficient rainfall most of the embanked fields were untilled and much of the arable ground appeared to have been in that condition for a long time

All the same the tract of Baghwana as a whole bore a far less desolate look than Nal and Greshak This may be accounted for partly by the fact that an extensive depression in the centre of the valley known as *Kar* is in years of fair rainfall completely under water and in others retains an adequate amount of subsoil moisture to permit of assured crops being raised all around it At intervals the depression receives so much drainage from the hills surrounding the valley that the water there gathered finds its way into the large flood bed which passes the south western portion of the valley before descending towards

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[1] See *Jhalawan Gazetteer* p. 59

Khozdar This intermittent overflow from the Kar prevents the depression from ever becoming a salt marsh and its area hence unproductive like the Kaps of Makran The favourable conditions thus secured here present a parallel on a small scale to those which keep the Hamun marshes of Sistan from becoming salt and allow of permanent cultivation being maintained along their shores

Mound of Inayat Shah damb—A considerable number of mounds found to the south and east of the Kar bear evidence to these portions of Baghwana having supported a fairly close settled population in later prehistoric times The intelligent local guidance provided by Sirdar Muhammad Khan of Bajoi the chief Rind landholder of the tract enabled me to visit them all in the course of a long day s ride After leaving my camp at the hamlet of Londo near the southern end of the valley I first visited a mound known as *Inayat Shah damb* It is situated about 1½ miles to the north east of Londo and within half a mile of the hamlet of Nulam It takes its name from a holy man supposed to have been buried at its southern end Local tradition believes that Naushirwan a Jadgal chief from the side of Las Bela resided on the mound before the conquest of the valley by the Rind tribe The mound rises by the right bank of the flood bed which enters Baghwana from the north west and carries its drainage towards Khozdar It is composed entirely of soft clay from decayed mud brick structures such as now prevail in the tract and rises only to 12 feet or so in height It measures about 120 by 80 yards The scarce painted potsherds to be found on the surface all show patterns common to the late prehistoric ware of Suneri and Spet damb Than executed on red or buff ground

Mound near Bit—Another and much more conspicuous mound about a mile further in the same direction is that known by the names of *Siro damb* or *Bit damb* the latter designation being taken from the hamlet to the ESE of which it stands It is of conical shape and rises steeply to a height of 30 feet Its diameter is about 50 yards at the foot and 18 yards on the top It is entirely composed of soft earth The painted pottery here too shows close resemblance to that of Suneri and Spet damb On Bit 1 (Pl XXXIII) appears the hind part of an animal About a mile to the NE of this I was shown a small damb close to the dwellings of Natwani a hamlet at the foot of the hills It stands to a height of only 5 or 6 feet with a diameter of some 20 yards What little of pottery could be found was all plain

Kissu damb—Riding for about 4 miles to the NNE mainly by the side of fields which skirt the Kar depression we reached the village of Bajoi with Sirdar Muhammad Khan s seat and half a mile to the east of it the *Kissu damb* This stands on rising ground and has a height of about 20 feet and a diameter of circ 60 yards at its foot Here too the fairly plentiful pottery all painted showed patterns of the late prehistoric type previously referred to The fact that the volutes of the scrolls so common in this type at Suneri etc appear here and at other mounds of Baghwana reduced to mere clumsy hooks with rounded ends (Kissu 1 Pl XXXIII) seems to point to a later and more careless treatment of this motif

Tomb of Mai Masura—When passing half a mile beyond an extensive Muhammadan graveyard known as *Mai Masura* I was pleasantly surprised to come upon the fine sepulchral monument (Fig 20) of the holy sister in faith who has given her name to the place The beautifully carved relief slabs of sandstone facing the Maqbara below and the similarly decorated miniature tomb stone which surmounts the whole were the first specimens of sculptural art I had seen since that domed tomb at Gwadar The Indian decorative motifs of the open lotus Vajra shaped trefoil Amalaka etc combined with the arabesque tracery show close similarity to those seen at that monument of the late 15th century Local tradition as communicated by Sirdar Muhammad Khan asserts that the relief panels and the tombstone on the top were carried from Kandahar through the air by a miraculous agency when the holy lady mendicant died in Baghwana also that the tomb was found at this spot when his Rind ancestors first conquered their lands in Baghwana fourteen generations ago

Mounds of Landau and Sangas—About 1½ mile to the north east rises the *Landau damb* close to patches of cultivation scattered amidst flood channels Its height is about 20 feet and the dimensions at its foot about 100 by 80 yards The top of the mound has been dug into for the rough stone material used in early structures The painted potsherds on the surface all show patterns of the previously indicated type mostly in coarse execution From here going half a mile to the north west across a wide flood bed we reached the small *Sangas damb* It is called after a hamlet situated near a spring at some distance further up the foot of the hill range northward The mound only about 12 feet high measures about 70 or 80 yards across at its foot The few painted potsherds were too small to show very definite patterns but seemed all of the 'late prehistoric type

Bari damb—From here we turned to the west and after passing for about 2 miles above the northern edge of the area cultivated in favourable years arrived at the *Radhani-damb* This too is of small size and about 20 feet high As the top and slopes are mostly occupied by dwellings only a single painted pottery fragment was found this also of the late prehistoric type' A site more important probably than any of the rest is marked by the *Bari damb* situated about a mile to SSE and about the same distance from the main village of Bajoi further south Its extent is circ 180 yards from east to west and its width where greatest probably not much short of this At its western end it rises to some 35 feet above the bottom of a flood bed which has cut through its northern slope This cutting has exposed layers of decayed mud brick work or *pisé* mixed with ashes animal bones and other refuse The lower eastern portion of the mound is occupied by dwellings On the higher western end painted potsherds of the Suneri and Spet damb type (*see* Bari 1 Pl XXXIII) were numerous so were also others of which the simple geometrical patterns coarsely executed in purple as well as black recalled the late painted ware found at certain mounds of Loralai and Pishin Occupation may have continued here longer than elsewhere at the mounds of Baghwana A well carved stone wheel measuring 11 2" in diameter and provided with a groove along its

edge was shown to me as having been exposed during a recent flood which passed down the cutting on the north slope A large jar for water also said to have come to light there could not be seen by me as it was locked up in one of the dwellings left unoccupied like the rest by the owners who had migrated as usual to Sind for the cold weather

Remains above Londo—Finally I examined in the evening the remains on the steep rocky ridge which forms the last offshoot of a hill spur separating the Baghwana valley at its south western extremity from an inlet westwards The ridge overlooks on the east the hamlet of Londo where our camps stood and is known as *Londo-damb* Its crest at a height of 68 feet above the alluvial ground on which the hamlet stands, is for a length of circ 68 yards covered with the debris of rubble built walls the width of this once occupied ground is about 10 yards Remains of walls more solidly built are traceable on the slopes lower down to the west and south Painted pottery lies in plenty both on the top and slopes Most of it shows patterns of the late prehistoric type in black over red or buff ground But some of the fragments like Londo 1 2 (Pl XXXIII) carefully painted in black over a dark red slip show designs which look to me older With this indication of an early occupation agrees the find of a fragment from a painted bull figurine picked up at the foot of the ridge The steep rocky ridge must have offered itself from early times as a place easy of defence

Gabar bands above Mugali—A journey of 48 miles carried me on April 9th through the hills northward from Baghwana up to Sorab It proved very instructive on account of the Gabar bands crossed by the old route now used as a motor track Most of them are found on ground which has for ages passed out of cultivation The first was encountered after leaving behind the side valley of Tutal and entering a defile above the scattered 'khushkaba' fields of Mugali (Fig 61) The band faced with large blocks of stone stretches here across the bottom of the defile and still stands to a height of 5 to 6 feet on the outer face In spite of massive construction it has been broken through in several places These breeches have in recent times been partially filled by a low earthen dam and this is carried from the original eastern end of the Gabar band for about 40 yards farther up to the foot of the rocky hillock which the road skirts Thus adequate flooding is secured for a large field above This extension indicates that the level of the ground immediately above the 'Gabar band' has been considerably raised by alluvial deposit since the ancient wall was built The original purpose of the latter as shown by the configuration of the ground was to form a reservoir from which fields no longer in existence could be irrigated lower down Such storage of water is no longer practicable as the ground behind is filled up almost to the level of the band and the weak earthen bank in the middle is bound to be swept away each time any rush of water descends the flood bed

Gabar bands north of Lakorian pass—At a point about 3 miles to the north of the Lakorian pass of the map and close on 25 miles from Londo the road ascends a wide stony plateau between low but steep hills Here quite a

succession of massive Gabar bands'[2] is passed. They run across the plateau from the foot of the hillside on the east and evidently were intended to control and distribute the drainage over the slope instead of its being gathered into ravines and thus lost to cultivation No trace of the latter is now to be found for miles around Such fertile alluvium as these bands might have helped to spread over the slope has disappeared long ago Among the rough stone blocks found in their walls there are some up to the size of 2 8 ×2 6″×2 2″ and more

An ancient barrage —Still more interesting is a large Gabar band an unmistakably ancient barrage which is met four miles further on and about half a mile to the south of the watershed between the valleys of Lakorian and Anjira There a remarkably massive and for the most part well preserved dam stretches right across the bottom of a narrow valley between the ends of two rocky spurs striking from WSW to ENE It was undoubtedly built to form a reservoir for purposes of irrigation and planned with distinct engineering skill The total length of the dam is 348 yards as seen in the sketch plan, Pl 13 Near its eastern extremity (Fig 64) it is broken for a distance of 41 yards by the torrent bed descending from the watershed At the western end where in all probability a sluice gate or some similar contrivance was placed the dam turns at right angles for 15 yards to the south before striking at a slant the foot of the rocky spur upon which its flank rests

Construction of barrage —At a point 72 yards from the above mentioned angle the dam has been breached for a distance of 20 yards by a minor torrent bed descending from the north west This breach has been very imperfectly closed by a modern embankment only 3 4 feet high This is roughly built up with stones from the ruined section of the dam and meant merely to assure more watering when rain fails to the field now extending over the lowest portion of the ancient reservoir Some 60 yards farther on the dam forms a re entrant angle and continues for a distance of 18 yards on a line set 2 yards further back This section which lies approximately in the middle of the barrage and thus perhaps was exposed to additional pressure has been strengthened by a buttress on either side projecting 2 yards beyond the main face of the dam and 5 yards broad The two buttresses though built with big blocks of stone like the rest of the dam have now fallen for the most part and at first sight might suggest breaches Two more ruined buttresses also projecting 2 yards but only 2 yards broad are found at distances of 9 yards and 8 yards respectively further to the east A portion of the facing wall of the dam has broken down farther on for about 6 yards as shown by the sketch plan and another break was made for the passage of the motor road

The wall facing the dam to the south stands in places still to height up to 12 feet As Fig 63 shows it is built with large rough blocks of stone very carefully set though without mortar or regular courses The large blocks used show sizes like 4 × 3 × 2½ Though the hillsides from which they were taken are close by yet the transport and putting into position of such stone blocks

[2] Masson Journey to Kalat pp 69 sq 330 duly mentions the Gabar bands of Lakorian as the most remarkable among many in Jhalawan He assumes them to have been places of defence.

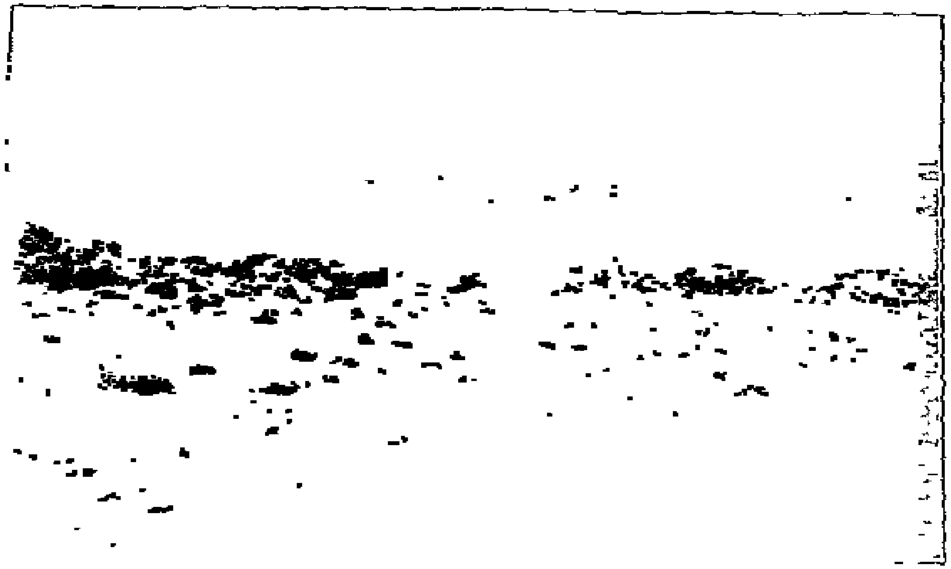


FIG. 61. GABARBAND ABOVE [illegible]

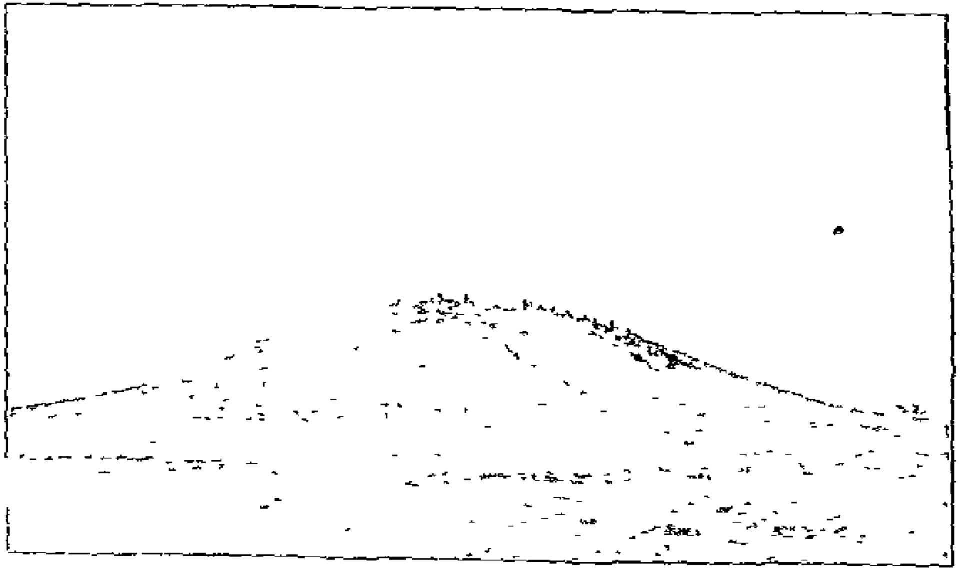


FIG. 62. [illegible] MOUND, MUSTANG, SEEN FROM S.E.

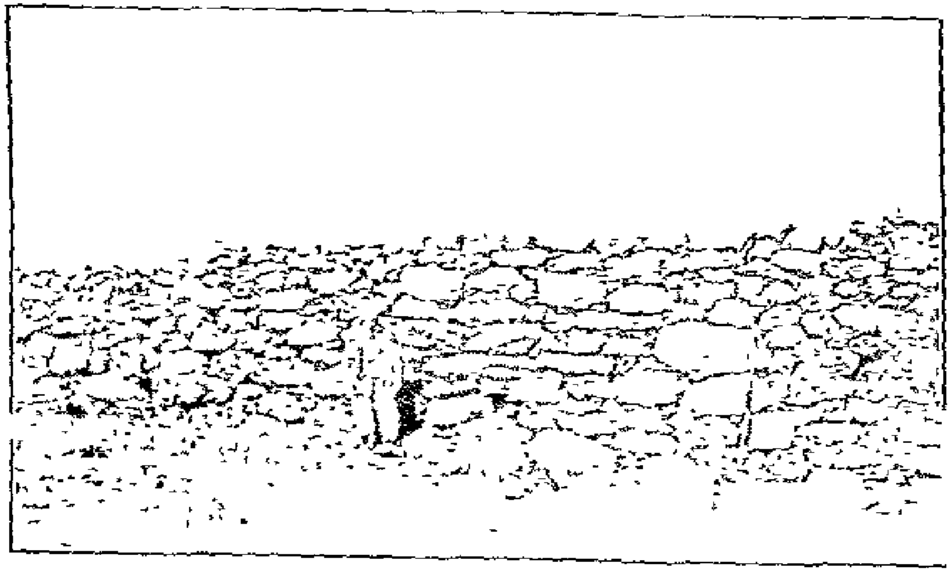


FIG. 63. WALL FACE OF 'GABARBAND' NEAR [illegible]

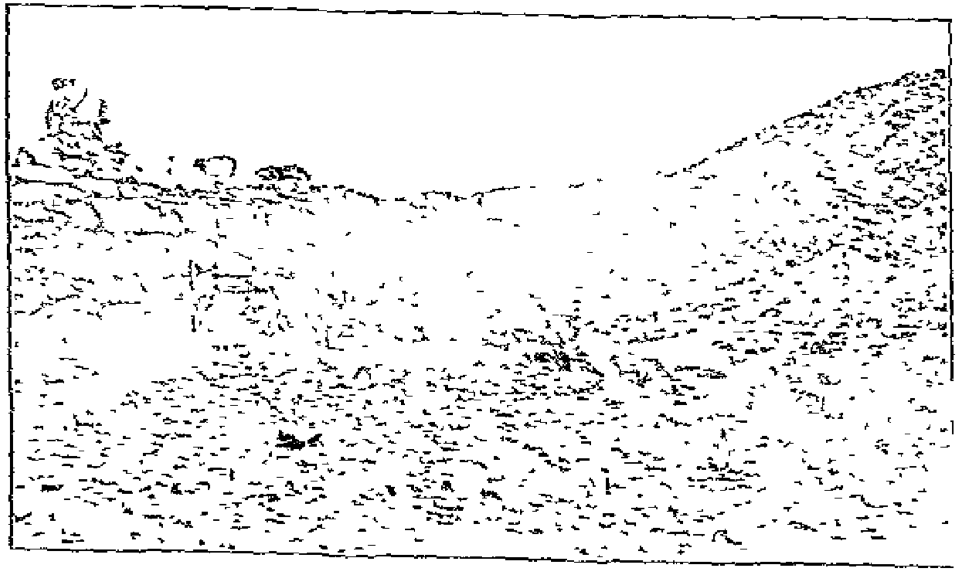


FIG. 64. EASTERN END OF 'GABARBAND' NEAR [illegible]

must have claimed great labour and a good deal of skill The thickness of the stone built dam seems to be about 9 to 10 feet Its power of resisting the pressure of the stored water was greatly increased by a rampart of earth and stone behind This slopes down at an angle of about 25° and ends within the area of the reservoir on a present level of about 2 feet above the outside foot of the wall

Extent of reservoir —Some idea of the volume of water which could be stored behind this barrage may be formed from the distance about 240 yards, which separates the top of the wall from the slope of the hillside to the north at the same level The lowest portion of the area thus turned into a reservoir forms now a flat patch of clayey alluvium which is cultivated after adequate rain has fallen Above the area once comprised in the reservoir smaller 'Gabar bands' of similar but less massive construction are seen to the north and north west separating terraces which were once under cultivation These of course were watered by the drainage before it found its way into the storage basin A succession of such 'Gabar bands' are visible eastward from the road right up to the watershed One of them crossed about 400 yards above the reservoir stretches right across the defile, here much narrower than below and obviously served for subsidiary storage of water The whole planning of the main dam and the work executed above it suggests a thoroughly developed system of irrigation, and deserves exact survey and study if possible by a competent irrigation engineer

The remainder of the day's journey took us through the upper end of the Anjira valley where much 'Khushkaba' land lay untilled Then across an easy pass well over 6 000 feet and across bare plateaus broken by detritus filled Nullahs the wide valley of Surab was reached There at the rest house the long missed sight of fruit trees in bloom and spring flowers pleasantly greeted us, and there we found ourselves once more on our old track which we had left just over four *months before in the bleakness of approaching winter*

SECTION iii —FROM KALAT TO MASTUNG

The mounds near Rodinjo which I examined on my journey on April 10th from Surab to Kalat have already been described in a previous chapter[1] My stay at the Kalat Residency on April 11 12th enabled me to inspect what old mounds were reported in the vicinity It also allowed me to gain some acquaintance with the physical conditions of the high valley in which the political centre and chief settlement of Sarawan and the adjacent portions of Baluchistan appears to have been situated all through later Muhammadan times anyhow those of Baluch and Brahui ascendency if not earlier also The political importance of Kalāt is sufficiently indicated by its name simply meaning the Castle

[1] See above p 17[illegible]

[2] The *Sarawan Gazetteer* p. 230 refers to the more specific designations of *Kalāt-i-B*[illegible] and *Kal*[illegible] as known to the natives [illegible] the former to distinguish it from Kalāt-i-Ghilzai in Afghanistan and the latter from its legendary founder

Importance of Kalat—There is good reason to assume that the importance of the place is due mainly to its central position its situation on a great line of communication from north to south most convenient both for trade and military movements and perhaps also to the climatic advantages secured by the elevation of the valley (about 6 100 feet on the average) Irrigation is limited to the narrow belt which stretches down from the foot of the rugged hills south of the Khan s castle to where the small stream fed by the fine spring known simply as Chashma and by Karezes leaves the valley below the village of Malguzar Even including the now abandoned Khushkaba fields about Band to the north the total extent of ground capable of cultivation in parts scarcely exceeds five miles in length and a mile in width The actual extent of tilled land is far more limited

Decline of Kalāt—The advent of the railway has deflected most of such trade as there was to Quetta and Mastung and political changes have affected the position of Kalat as an administrative centre Shorn of these advantages derived from human factors Kalat has seen its prosperity steadily dwindle, until now the town nestling below the large grim pile of the Miri is for the most part deserted and the population of the whole valley down to Malguzar reduced to about two thousand according to the Census of 1920 1 Were it not for the Khan s troops and his numerous retainers it would be still smaller It is important to note that at Kalat just as at Mastung by far the greatest part of the cultivated area depends on Karez irrigation and also that in both tracts the main body of the settled cultivators consists of Persian speaking Dehwars These are undoubtedly of Tajik origin[3] and believed probably with good reason to have originally come from Kandahar and other parts of Afghanistan It is very tempting to connect the development of Karez irrigation at Kalat and also at Mastung with this settlement during a comparatively late period of culturally advanced and industrious Tajik immigrants

Absence of large mounds—Attention had to be called to the local conditions just briefly indicated as they help to explain to a great extent why in spite of the important part played by Kalat in the modern history of Baluchistan there are no remains of ancient settlements of any size to be traced in this tract The absence of large mounds with prehistoric pottery of an early type is in any case significant It seems to lend support to the inference that the valley could have been but scantly settled before the introduction of Karēzes, no doubt in historical times rendered close occupation possible at least over a part of it

Damb' of Kalat—The *Damb i Band* at which my survey began proved nothing more than a low natural ridge cropping out in the middle of the valley some 3½ miles to the north of the Residency No ancient remains were to be found on it but around could be seen traces of terraced fields long ago abandoned Proceeding across these to the SSW for about 2 miles there was reached the mound of *Bundal hi* It is situated about half a mile to the east of Malguzar village near Karez irrigated fields and is entirely artificial It is about

[3] Cf *Sarawan Gazetteer* pp 69 sq

15 feet high and extends for about 80 yards from east to west Amidst plenty of coarse plain pottery but few painted pieces could be found on the surface These too showed only poorly drawn parallel bands in black resembling the late ware found on the mounds near Rodinj [4] The *Malghori damb* about half a mile to the ESE of the Residency is a small natural hillock of calcareous stone cropping out from the peneplain beneath which pass all the Kalat karezes The hillock is covered with stone debris from decayed habitations and coarse plain pottery of no old look But among some chert flakes picked up here a few show signs of having been used as scrapers Out of the eight Karezes which have their heads around the hillock three no longer supply water Two of these were said to have run dry for the last five or six years and the third a generation ago The Khasi kaba fields around are no longer tilled The same is the case with the area to the south known as *Dasht i Murad* which before received water from the fine spring the *Chashma* already referred to Its volume was said to have diminished in recent years and to be no longer sufficient to reach so far

Another low hillock called *Khwaja Zabar* about 200 yards to the SW of the Malghori damb* is also covered with rubble from decayed dwellings It measures some 130 yards from east to west and about 100 yards across Here too the painted pottery showed mostly the same late type as at Bundakhi But a few fragments decorated in black with the hook design familiar from Suneri and other Jhalawan sites point to occupation having started here in late prehistoric times About 300 yards to the south there crops out among aban doned fields a low mound partly natural known as *Khad i Koking* from the hamlet near by It measures approximately 100 by 40 yards and rises to a height of 10 feet Here we found besides painted fragments of the late pre historic type pieces of plain blue and green glazed ware which may belong to early historical times

Ruined tombs near the Chashma —The visit paid from here to the 'Chashma spring about 2½ miles to the south, proved of interest It took me past pleasant orchards and homesteads all recalling a small oasis in Persia and clearly bearing the impress of their Dehwar owners racial origin Near the great spring is found a group of half ruined domes under which are buried the Ahmadzai Khans of Kalat They give to the spot a striking resemblance to one of the Su b shis' (head of water) of Chinese Turkestan venerated by Muhammadans of the present day quite as much as they were in Buddhist times The fine spring which issues from two Karez like rifts about 30 feet below the valley floor supplied at the time I measured its volume approxi mately 9 75 cubic feet of water per second This volume was declared to have diminished as compared with that of former times Yet this reduction seems scarcely sufficient to account for the badly neglected look of the arbour and fields of lucerne which cover the ground between the spring and the crumbling town walls It was a picture of decay illustrating once more how in an arid land

[4] Cf above p 1

human factors can within certain limits produce results which centuries hence might easily be mistaken for those of true 'desiccation'.[6]

Mound of Kullu kalat.—Information collected already on my passage from Quetta in November enabled me to use my journey to Mastung on April 13th for visiting two 'dambs' reported in that portion of the Mungachar tract which the road crosses to the north of Kalat. This large and, owing to its Karezes, comparatively well populated tract drains into the Shirin-ab river passing to the west of Mastung. The same river receives also the drainage of the Chapar valley to the north-west of Kalat, which contains near its centre a mound known as *Kullu kalat*. This I was not able to visit owing to its distance from Kalat and the need of husbanding time for a meeting arranged with Sir John Marshall at Taxila by the third week of April. Specimens of painted pottery brought to me from that mound comprised fragments which are manifestly of late prehistoric type. Some glazed pieces seem to indicate that the locality was occupied also during historical times down to the Muhammadan period.

Mound of Salu khan.—From the Levy post of Mungachar, which was reached after a twenty miles' drive from Kalat, a ride of close on five miles to the north-west brought us to the 'damb' of *Salu khan*, named after the hamlet built at its foot. The way led first across a long series of Karezes, many of them destroyed a couple of years before by a heavy flood from the high range to the south-east, and then across a wide clayey plain with scattered patches of 'Khushkaba' fields left untilled for years. The hamlet too appeared to have been abandoned. The mound rising above it (marked on the map as a triangulation station with the height of 5,880 feet) is about 30 feet high. Its position in a wide trough proves it to be of entirely artificial origin. It measures at its foot about 120 yards from SW. to NE. and some 80 yards across. Its top is crowned by a low wall of rough stones enclosing a Ziarat. The slopes are covered with plentiful plain potsherds of coarse make and small stones evidently from decayed dwellings built with rubble and clay. Only few painted fragments were found and those of the same late type as at the mounds near Rodinjo and Kalat.

Mound of Saiyid Maurez.—Moving due east for three miles past fields still receiving water from Karezes we reached the cluster of hamlets known as Mande-haji and half a mile further the mound which after a much frequented Ziarat on its top is called the *Saiyid Maurez damb*. The map marks it with the height 5,860 feet. An extensive graveyard spreads at its southern foot. The mound appears to be wholly of artificial origin and measures about 300 yards from north to south and some 250 yards where widest. It rises to a height of about 40 feet from the gently sloping ground to the north, while its height from the level of the Mujawir's hut to the south is over 50 feet. The plentiful potsherds on the slopes are chiefly of plain red, buff or greenish-grey ware, while the painted fragments show mostly hooked scrolls (Maur. 1, 2, Pl. XXXII) of the late prehistoric type of Sunen, etc. But by the side of these there were picked up low down in an eroded Nullah and at the foot of

[6] Cf. e.g. the observations recorded by me, *Serindia*, pp. [illegible]03 sqq.; ... pp. 625 sq.

the mound some pieces resembling Nal pottery in design and colour as well as a few others with neatly executed geometrical patterns which look distinctly early. The mound obviously marks a settlement of some size. As no glazed ware could be found it is probable that it was not occupied since prehistoric times. A mile beyond the road was regained and the journey continued to Mastung.

Mounds near Mastung.—Already during my stay at Mastung early in December I had used a brief interval in the strenuous labours which detained me there to pay a visit to the large mounds to the north-west of Mastung town. Of these the *Sampur damb* situated at a distance of about 2½ miles in a direct line from the Political Agent's Bungalow had been the scene in March 1925 of systematic and fruitful excavations conducted by Mr. Hargreaves. The detailed account which he has given of these and which has become accessible to me since my first visit[6] makes it unnecessary for me to record the impression then gained. I may however mention that Mr. Hargreaves' finds of a fine silver cup rightly assigned by him to the 1st century A.D. and of an Indo-Scythian bronze coin completely confirm the conclusion then drawn by me from the potsherds I had picked up on the surface. These comprised plain ribbed ware, fine red pottery decorated with parallel polished lines, the fluted handle Sam. 1 *(Pl. XXXII)* and the neck of a large jar Sam. 2 decorated with an impressed scroll ornament. All these are methods of ornamentation which observations made in the course of my explorations in Sistan, Upper Swat and northern Baluchistan had led me to associate with pottery of the early centuries of our era. To this period pointed also a fragment retaining traces of a thick blue glaze. The few pieces of pottery painted in black on red or buff showed too little of their patterns to define their type. All the more interesting it will be to examine the painted potsherds excavated by Mr. Hargreaves when reproductions become accessible.

Mound of Spet-bulandi.—Mr. Hargreaves has already noted and briefly described the conspicuous mound which rises three miles to the north of the Sampur damb and is marked on the map with the elevation of 5,246 feet. Fig. 62 shows it, as seen from the south-east across bare clayey ground. Its name was given to me in its Baluchi form as *Spet-bulandi*,[7] the corresponding Persian form being *Safīd-bulandi*. At the northern foot of the mound issues a spring filling a tree-shaded pool which is visited on certain dates as a Tirtha by local Hindus from Mastung town and neighbouring places. It had in fact on the day preceding my second visit been the scene of such pilgrimage. The plentiful decorated pottery to be found on the surface had attracted my attention already on my first visit in December and as the mound showed no sign of previous exploration I determined to use a day's stay at Mastung, on April 14th, for some rapid trial excavation.

As seen from the sketch-plan Pl. 10, the mound is of considerable size, its measured perimeter being 77[illegible] yards and its length from east to west approximately 400 yards. Its height as roughly levelled proved to be 78 feet. On the

[6] See *Annual Report A. S. I.* 1924-25, pp. 56-60, Pl. XV.
[7] This form is transformed on the map into *Spīt-plāst* by a kind of popular etymology.

top some long slabs of stone, undressed and probably dug up from the mound, have been set up by pious hands to mark the spot where a certain holy man, Yak Pasi by name buried at Bahram shahi, near Mastung is supposed to have sat and taught The whole mound shows everywhere on the surface a greyish-white colour, the whole consisting of alluvial soil from the decomposed mud-brick or *pise* walls of dwellings This accounts for its name, the white hillock' The softness of the earth, nowhere mixed with stones or other hard debris, *obviously facilitates erosion This explains the great abundance of pottery to* be found on the surface

Decorated pottery—Besides good plain ware, either red throughout or bearing a whitish or light cream coloured slip on the outside there were found here as the specimens in Pl XXXII show, many flat ribbed pieces (S Bul 1,2) both with and without a creamy white slip, fragments of small vessels with a fine terracotta slip and parallel polished lines (S Bul 3,4), and fragments of larger ones with incised or impressed ornament like S Bul 5,6 The relief-decorated bases S Bul 7,9 show a treatment closely corresponding to that on cups excavated by Mr Hargreaves at the Sampur mound [6] Special interest attaches to the application of a whitish slip over red ware, whether plain or decorated, like the handle S Bul 8 or the ribbed piece S Bul 2, for it fully agrees with the same colouring commonly found on the pottery dating from the early centuries of our era at such widely separated sites as Moghul ghundai Tōr dhērai in the north and *Jīwanri, Zangiān, etc, in the south This furnishes a valuable chronological* indicium Of glazed pottery only a very few small pieces were found, they showed a plain blue or green colour, in each case much effaced Equally rare were fragments of painted ware, with coarsely executed design in black or dark brown, they are too few and too small to allow the type of pattern to be determined

Pottery found in trial trenches—The trenches I IV shown on the sketch plan were cut on different levels of the upper portion of the mound and carried to an average depth of 4 5 feet The potsherds found (for specimens, see Pl XXXII) all corresponded in type to those already described which erosion had exposed on the surface The fragment of a small cup, S Bul IV 1, is of a shape exactly the same as illustrated among Mr Hargreaves' specimens from the Sampur mound (see his Pl XV g). The base here too is disproportionately small as in so many of the cups from early chalcolithic mounds like Periano ghundai and Suktagen dōr, yet the modelling is quite different The very coarse hand made cup (?), S Bul IV 2, is curious, it is fitted on to a heavy fragment of iron and its purpose obscure The fragment S Bul I 1 is decorated with a cable ornament in relief, often found on the N W Frontier on pottery of the Buddhist and later periods Fragments of small iron implements found in trench IV would suffice to establish the fact, if any further proof were still needed that the deposits of Spīt buland belong to the historical period

Prolonged occupation of site—The agreement between the pottery remains at this mound and at the Sampur one is so close that the contemporary occupation

[6] See *Annual Report A S I* 1924 25, Pl XV f g

of both sites may be considered as certain That this occupation lasted for a prolonged period may in view of the height of both mounds be safely assumed with Mr Hargreaves also that this occupation ceased before Muhammadan times and was never afterwards resumed And here it may be pointed out that the close similarity in shapes between a number of the complete vessels excavated by Mr Hargreaves[9] and those found by me at sites so distant as the burial grounds of Moghul ghundai in Zhob and Jiwanri Zangian etc in Makran is of special documentary value because it allows us to prove that the same ceramic style prevailed over so wide an area within the identical period

Absence of prehistoric mounds —In conclusion attention may be called to the curious observation that in a tract which now certainly is the best cultivated and most populous within the whole of the Kalat State[10] no mounds indicating occupation within prehistoric times appear to exist Accepting their absence as a fact—and in view of Mr Hargreaves prolonged work at Mastung this can scarcely be doubted—we are naturally induced to look for some explanation The only one which I can think of at present is suggested by the analogous case of Kalāt There, too we have noted a locality of importance in historical times where no evidence of prolonged prehistoric settlement can be traced At both Kalat and Mastung it is the extensive use of Karēzes which permits of close occupation by an agricultural settlement Would it be right to connect the presence at Mastung of large mounds dating from the early centuries of our era and the absence of others from prehistoric times with the great change which the introduction of Karez irrigation must have brought about in the economic resources of those areas ? Under arid climatic conditions cultivation without Karēzes would there necessarily be very precarious and insufficient to maintain more than a thin and semi nomadic population But here as in so many cases where we are dealing with negative facts and where historical records fail us the critical student will be well advised to refrain from a definite answer

At Mastung the exploratory work of my tour came to its close On April 15th I regained Quetta There under the hospitable roof of the Hon'ble Colonel H B St John the Governor General's Agent and Chief Commissioner I was kept very busy for one day disposing of the manifold practical tasks connected with our 'demobilization' Then the urgent call of the meeting already referred to obliged me to hurry northward to Taxila There in the delightful surroundings created by Sir John Marshall's care at a fascinating historical site it seemed strange to recall all the scenes of prehistoric life which those months of happy if trying work had allowed me to see in poor arid Gedrosia

FINIS

[9] Compare the Nos [illegible] 54 and Nos. [illegible] 37 38 60 [illegible] in photographs [illegible] of Mr Hargreaves Pl XX of Sampur pottery with the specimens from the above named sites reproduced in Plates X of [illegible] B.J. [illegible] Tour and Pl. VIII IX XI below

[10] The Census returns of 1901 as recorded in [illegible] for the Mastung tract a settled population of 9,686 Assuming the permanent habitations of the tract to be about 90 square miles as suggested by the map and the village list this would indicate a population of about [illegible] per sq. mile a number vastly in excess of that of any tract in the Kalat State.

APPENDIX

REPORT ON A COLLECTION OF BONES MADE BY SIR AUREL STEIN IN MAKRAN

BY

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AND

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INTRODUCTORY REMARKS

The collection sent to us by Sir Aurel Stein for examination and report comprises two human skulls and a number of small bones and bone fragments etc that were found during the course of excavation in cinerary pots, funerary vessels funerary bowls or loose in the earth A complete list of these fragments is given in Appendix A Both the skulls were still to a large extent embedded in the earth in which they had been buried The earth was clearly an alluvial deposit and mixed with it were a number of small stones fragments of charcoal broken brick, etc Dr G de P Cotter of the Geological Survey of India has very kindly examined the stones for us and he reports as follows —

The largest rounded stone appears to be a fine grained sandstone A micro-section was cut from a smaller piece very similar to the large one and proved to be a fine grained sandstone cemented by copious calcareous material. Such rocks are found abundantly in the Tertiary and Pleistocene The smaller fragments are kankar i e concretions of secondary calcium carbonate and this coats the sandstone fragments also

In addition to these stones charcoal fragments etc there was a single sub fossil shell of the mollusc *Melanoides tuberculatus* (Muller) a common inhabitant of fresh water and possessing a range of distribution at the present day from Morocco throughout India Burma and Ceylon to China and Australia this shell was probably an original ingredient of the alluvium

During the process of cleaning away the earth from the skulls several interesting objects came to light Skull A which appears to have been buried

on its left side had become greatly crushed but near the top of the cranium and in close proximity to the left parietal bone were a number of sub fossil shells 12 in all of a species of mollusc belonging to the genus *Natica* Dr Srinivasa Rao of the Zoological Survey of India has very kindly examined these shells and he informs us that so far as it is possible to judge they are a variety of the species *Natica asellus* Reeve Exact specific determination is not possible as in every case the shell was considerably eroded and the lip of the mouth was broken The genus *Natica* has a wide distribution throughout the great Oceans and the species *N asellus* Reeve is known to occur throughout Indian seas The occurrence of a small group of shells of a marine mollusc in the situation in which they were found and their absence in every other part of the earth attached to the skull appears to indicate that they had been placed there deliberately at the time of burial and were not a natural ingredient of the alluvium and it is possible that the number 12 may possess some significance

Embedded in the earth surrounding skull B was discovered the head of a humerus (arm bone) that was apparently human and in all probability was originally part of the same skeleton and near the right side of the face were the bones of the leg of a sheep (*Ovis* sp) including the lower part of the Tibia, the Tarsal bones and the upper part of the 3rd Metatarsal bone

GENERAL CHARACTER OF THE BONES

The bones were extremely fragile and were of a pale fawn colour In both appearance and texture they were very similar to bones that have been excavated by the Archæological Survey of India at Mohenjo daro in Sind and at Nal in Baluchistan and regarding which we have already submitted our reports[1] and

There was no trace of any blackening or charring of the bones and we are of opinion that the bodies had not been burnt The presence of small fragments of charcoal in the earth surrounding the bones might be thought to be evidence in favour of cremation, but such fragments would very easily be washed up and deposited in an alluvial mud and as we have already pointed out, the earth surrounding the bones was clearly of an alluvial character In both cases the body appears to have been buried on the left side with the head strongly flexed on the chest so that the posterior region of the mandible and especially the angle was in close relationship to the cervical vertebræ and as a result of this position the lower jaw had been retained in position relative to the upper jaw the upper and lower teeth being in apposition

SKULL A

The whole of the skull has been crushed flat the parietal bones being distorted and flattened so as to abolish almost entirely their natural curvature

[1] Sewell and Guha Report on the bones excavated at Nal Excavations in Baluchistan Appendix V pp. 60 80

[2] Sewell and Guha Preliminary report on the bones excavated at Mohenjo-daro (in the press)

The frontal bone has been broken irregularly into two portions the line of fracture passing very nearly down the median line and a portion in the region of the glabella has been thrust outwards (forwards) The upper part of the coronal suture has been widely forced apart to the extent of 2·5 cm The right parietal bone has been broken the antero superior angle being completely detached The occipital bone has been pushed over to the right side and is considerably distorted The right mastoid process is completely missing and the posterior two thirds of the right zygomatic arch is absent The nasal bones have also disappeared The right orbit is nearly intact in so far as the margin is concerned, but the thin bones of the inner wall including the ethmoid and the lachrymal have been displaced and pushed into the orbit obliterating about one half of its extent Both the maxilla and the mandible have been crushed flat the mandible being broken across in the middle line On the left side the whole of the cranium has been flattened and pushed inwards and the external margin of the orbit has been crushed against the inner wall and the side of the nose Owing to the skeleton having lain on its left side the bones of this side have undergone considerably more decay than those on the right and in consequence it was a matter of very considerable difficulty to clear this portion of the skull from the earth in which it was embedded

The face when viewed from the side presents a remarkably prognathic appearance but owing to the distorted and crushed condition of the skull it is very difficult to decide to what degree this prognathism is the normal condition of the skull and how much is due to the flattening and consequent thrusting forward of the 'muzzle region we are of opinion however that there must have been a considerable degree of prognathism in life It is interesting to note that in spite of the distortion and compression of the skull, those incisor teeth that are still *in situ* in the jaws meet in exact opposition and the upper incisors do not overlap in front of the lower this condition as has been pointed out by Keith, is a characteristic of the skulls of palæolithic and neolithic times

The upper part of the vertebral column though much broken and decomposed, is still *in situ* in the neighbourhood of the foramen magnum and from the relative positions of the various parts of the vertebral column and the skull it is clear that at the time of burial the head must have been strongly flexed on the chest the angle of the mandible thus coming into close relationship with the upper vertebræ As a result of the compression mentioned above the right ramus of the mandible has been forcibly pressed inwards (i e downwards) against the bodies of the vertebræ and has been broken The coronoid process of the ascending ramus is still attached to the body of the mandible but the posterior part of the ascending ramus has been broken across and the condyle has been detached the remains of the condyle were still in the glenoid fossa but were too decomposed to be preserved

Judging from the thickness of the cranial vault the individual was in our opinion, probably a male and was undoubtedly adult There are no indications

of any closure in any of the parts of the sutures that remain intact and capable of examination Such teeth as are present are in good condition but are markedly eroded the crowns of the molar teeth being worn flat as is the case with the teeth of the skulls from Nal and Mohenjo daro

Such measurements as we have been able to take on this skull are given below in Tables 1 to 3 together with those of skull B and we have also given those of the Nal skull for comparison

SKULL B

This skull is in a great deal better state of preservation than Skull A but it too has undergone a considerable amount of compression and distortion The right occipito parietal region has been considerably compressed and flattened and thrust over to the right while the face is pushed over to the left side Unfortunately during transit from Sir Aurel Stein to the Indian Museum the skull suffered a certain amount of damage the symphysial region of the mandible was broken and the bones of the upper part of the cranium were detached and smashed into small pieces that up to the present time we have been unable to fit together We have attempted to reconstruct the mandible and in the process we may have somewhat exaggerated the symphysial height, so that such measurements and indices as depend on the correct position of the 'gnathion' must be accepted with reserve The depth of the horizontal ramus opposite the 2nd Molar tooth is 32 mm but this rapidly increases till opposite the 2nd Premolar tooth it is between 40 and 41 we do not think that the calculated symphyseal height of 40 is likely to be far out

The bones of the upper part of the right orbit and nearly the whole of the frontal region the upper parts of the parietal bones and the supra occipital portion of the occipital bone are missing and the upper margin of the left orbit was detached Fortunately the earth with which the skull was filled has remained more or less intact so that the general outline of the skull is still indicated

The skull has undergone as we have mentioned already some degree of distortion resulting in fracture of some of the bones The occipital bone has been snapped across near the middle line and in the region of the inion has been pushed outwards The whole of the outer wall of the left orbit including the malar bone and the zygomatic arch of the left side are missing and the greater part of the left mastoid process is also wanting The left margin of the nasal aperture is broken and the bone displaced inwards to a slight extent The symphysial region of the mandible is broken and in addition the whole bone has undergone a certain amount of warping

The muscular attachments are well marked running at first backwards and then backwards and upwards from the posterior end of the zygomatic arch on both sides of the body is a well marked bony ridge that is continued into the line of attachment of the temporal muscle The right mastoid process is remarkably long the distance between the porion and the lower end of

the mastoid process being as great as 37 25 mm the process is comparatively narrow but the hyoid groove on the internal aspect is deep The angle of the mandible is everted and forms a distinct crest

The lower jaw was *in situ* but has undergone a considerable degree of warping The symphysial region has been badly broken and the alveolar margin pushed back so that the incisor teeth are displaced and a spurious appearance of prominence given to the right canine tooth The left canine and 1st premolar are missing as also is the 2nd molar on each side The depth of the body rapidly increases from 32 mm opposite the 2nd molar tooth to 40 or 41 mm between the 1st and 2nd premolar teeth The region of the gnathion appears to have been prominent and there is a well marked vertical crest on the inner aspect running from the geniohyoid tubercle to the lower border of the symphysis All the teeth are considerably worn with the exception of the 3rd molar As was also the case in skull A this skull appears to have been strongly flexed on the chest at the time of burial so that the chin pressed on the chest and thus retained the lower jaw in position In this case the upper incisor teeth appear to have overlapped the lower incisors There is some degree of prognathism present but in the main this seems to have been of the alveolar type the facial angle falling near the line between mesognathism and orthognathism The teeth are large and are considerably worn though not quite to the same extent as in skull A Owing to the better state of preservation of this skull it was possible to take many more measurements these are given below in Table I

The skull appears to have been dolichocephalic though not so long as the Nal cranium The frontal and supraorbital regions are too damaged to permit of any very definite description but the glabella and supraorbital ridges do not appear to have been pronounced and the nasion is not markedly depressed The forehead judging from the appearance of the skull and the contained mass of earth was of moderate height and probably sloped backwards to a slight extent A supraorbital foramen was present on the left side

Owing to the impossibility of obtaining any measurement even approximate of the length or breadth of the cranium it has not been possible to calculate the cranial capacity by means of the Lee Pearson formula[1] We have however been able to get an approximate estimate of the auricular height namely 119 mm and from this we can calculate the cranial capacity by Wingate Todd's formula[2] —

Cubic Capacity = 14 43 × auricular height — 288 ccs

This gives a result of 1428 5 ccs which compares quite favourably with the calculated cranial capacity of the Nal skull in which the same formula gives an estimated capacity of 1442 9 ccs

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[1] Alice Lee and Karl Pearson "A first study of the correlation of the Human Skull" *Phil. Trans.* ... Series A vol. 196 p. 24 1901 London

[2] T Wingate Todd "Mathematical Calculation of Cranial Capacity" *Amer. Journ. Phys. Anthrop.* vol. VI p. 175 1923 Washington D C.

The sex of the skull is in all probability male The bones of the upper part of the cranium are comparatively thin but the degree of development of the muscular crests seems to us to point towards the skull belonging to the male sex The individual was adult all the teeth are erupted and closure of the sutures had already commenced especially in the lambdoid suture of the right side near the lambda

TABLE I

Measurements	Skull A	Skull B	Nal Cranium
	mm	mm	mm
The Skull			
Maximum horizontal circumference		475*	528*
Nasion Lambda Sagittal length	268	268	271
Auricular height		119	120
Nasion prosthion length		81 5	72
Nasion gnathion length		130*	
Nasion basion length		103*	99 5
Bizygomatic breadth		116*	120*
Orbital breadth	41		40
Orbital height	33		33
Interorbital breadth		21	20
Nasal height		54	49
Nasal breadth		25 5	23
Length of alveolar arch		59	59 5
Breadth of alveolar arch		66	65*
Molar length		45	42
Palatal length		50	53
Palatal breadth		42	42
Mandible			
Bicondylar breadth		108	
Bigonial breadth		95 5	

* All measurements marked with an asterisk are approximate only and have been obtained by calculation

TABLE I—*contd*

Measurements	Skull A	Skull B	Nal Cranium
	mm	mm	mm
Mandible—contd			
Mandibular length		74	
Height of Ramus	57	R 58 L 60	
Minimum breadth of Ramus	35	R 31 L 34 5	
Maximum breadth of Ramus	4[illegible]	44	
Symphysial height	36	40*	
Height of body		32	
Mandibular angle	117°	1[illegible]1°	
Facial angle (Frankfort)		R 86° L 83°	88°

* All measurements marked with an asterisk are approximate only and have been obtained by calculation.

TABLE II

Indices	Skull A.	Skull B	Nal Cranium
	mm	mm	mm
Total facial Index		9[illegible] 1	
Superior facial Index		70 3	60
Orbital Index	80·49		8[illegible] 5
Nasal Index		43 5	4[illegible] 91
Alveolar Index		111 9	10[illegible] 3
Palatal Index		80 4	79 25
Dental Index		4[illegible] 7	42 2
Mandibular Index		6[illegible] 1	
Ramus Index	63 15	R [illegible]7 5 L 53·0	

TABLE III

Measurement of the teeth	Skull A	Skull B	Nal Cranium
Upper Jaw	mm	mm	mm
Right side			
1st Molar — Length	11.0	11.5	11.0
1st Molar — Breadth		13.0	13.0
2nd Molar — Length	10.0	11.25	10.0
2nd Molar — Breadth		12.5	11.5
3rd Molar — Length		9.5	9.5
3rd Molar — Breadth		11.5	11.0
Left side			
1st Molar — Length	10.0	11.0	11.5
1st Molar — Breadth		13.0	13.0
2nd Molar — Length		11.0	11.25
2nd Molar — Breadth		13.0	12.0
3rd Molar — Length		9.5	
3rd Molar — Breadth		12	
Lower Jaw			
Right side			
1st Molar — Length		12.5	
1st Molar — Breadth		11.5	
3rd Molar — Length		13.0	
3rd Molar — Breadth		11.75	
Left side			
1st Molar — Length		13.0	
1st Molar — Breadth		11.5	
3rd Molar — Length		13.0	
3rd Molar — Breadth		11.5	

The 2nd Molar tooth on each side was broken

RELATIONSHIP

Owing to the compression and distortion that both skulls had undergone, as a result of the pressure of the superincumbent earth in which they had been buried, *it is impossible to be absolutely certain regarding the true shape of the* skulls during life, but so far as can be judged they were both dolichocephalic and the second skull (skull B) appears to have possessed a high vault very similar to that of the "Nal" cranium Unfortunately the lower jaw is not present in the "Nal" cranium and in consequence one can only conjecture what the face as a whole was like, the upper facial index, however, shows that this portion of the face was long and narrow (leptene), and this character is even more marked in Skull B of the present collection, in which it is hyper leptene having an upper or superior facial index of only 71 ·55 Again in the "Nal" cranium the nose is long and narrow and in skull B this character is even better marked, for whereas the "Nal" skull possesses an index of 46·94, which just puts it in the leptorrhine group in skull B the index is only 43·5 so that the nose is very leptorrhine Both the orbital and alveolar indices are of moderate amount, the skull being *mesoconch and meso staphyline* *Owing to* the distortion that the skull has undergone the facial angle is not quite the same on the two sides of the body on the right side it is 86° and on the left 83°

There can be little doubt that skull B was long and had a high vault The face was long and narrow, and the nose also was long and narrow and in all probability had a high pitch The teeth which are large, are set in an arch of moderate size (mesostaphyline) The angle of the jaw is pronounced and though there is some slight degree of prognathism present, this is almost entirely alveolar in type, the actual facial angle being between 83 and 86, thus falling near the border line between orthognathism and mesognathism

While agreeing with the "Nal" skull in its general type Skull B would appear to show traces of mixed origin and in certain respects tends to approximate to the Caspian or Nordic Type of skull

APPENDIX

Skull A.—From a body buried in Shahi tump Makran

Skull B—From a body buried in Shahi tump, Makran

Parcel 1—Suktagen dor, from a cinerary pot Bone fragments

(1) Lower end of humerus of a small mammal—? Sheep (*Ovis* sp)

Parcel 2—Suktagēn dor from a cinerary pot Bone fragments

(2) A vertebra of a fish

(3) Teeth of an Ox (*Bos indicus* ?)

Parcel 3—T he dap

(4) Several spines of a Sea Urchin (*Stomopneustes variolaris* Lamarck)

Parcel 4—Shahi tump bones from funerary vessel

(5) Portions of a lower jaw with molar teeth of a sheep (*Ovis* sp).

Parcel 5—Shahi tump bones in funerary bowl

(6) Small fragments of bone indeterminable

Parcel 6—Mehi bones from burial deposit

(7) Part of the head and greater tuberosity of the humerus of a small mammal (*Ovis* sp ?) The animal was young and not fully grown for the Epiphysis had not yet joined to the Diaphysis (shaft)

(8) A fragment of a vertebra of a small mammal The animal was not yet adult for the Epiphysis had not yet joined with the centrum

The bone fragments had become stained a green colour suggestive of the presence of copper

Parcel 7—Nundara, bone fragments from S E corner of cella below stone slab

(9) Portion of a rib of a large mammal probably an Ox (*Bos indicus* ?)

(10) Part of the Os innominatum of a large mammal probably an Ox (*Bos indicus* ?)

(11) Part of the axis vertebra (2nd cervical) of a ruminant (*Ovis* sp ?)

(12) Lower end of Metacarpal III of fore limb of a small mammal (*Ovis* sp ?)

(13) Portions of ribs of a small mammal

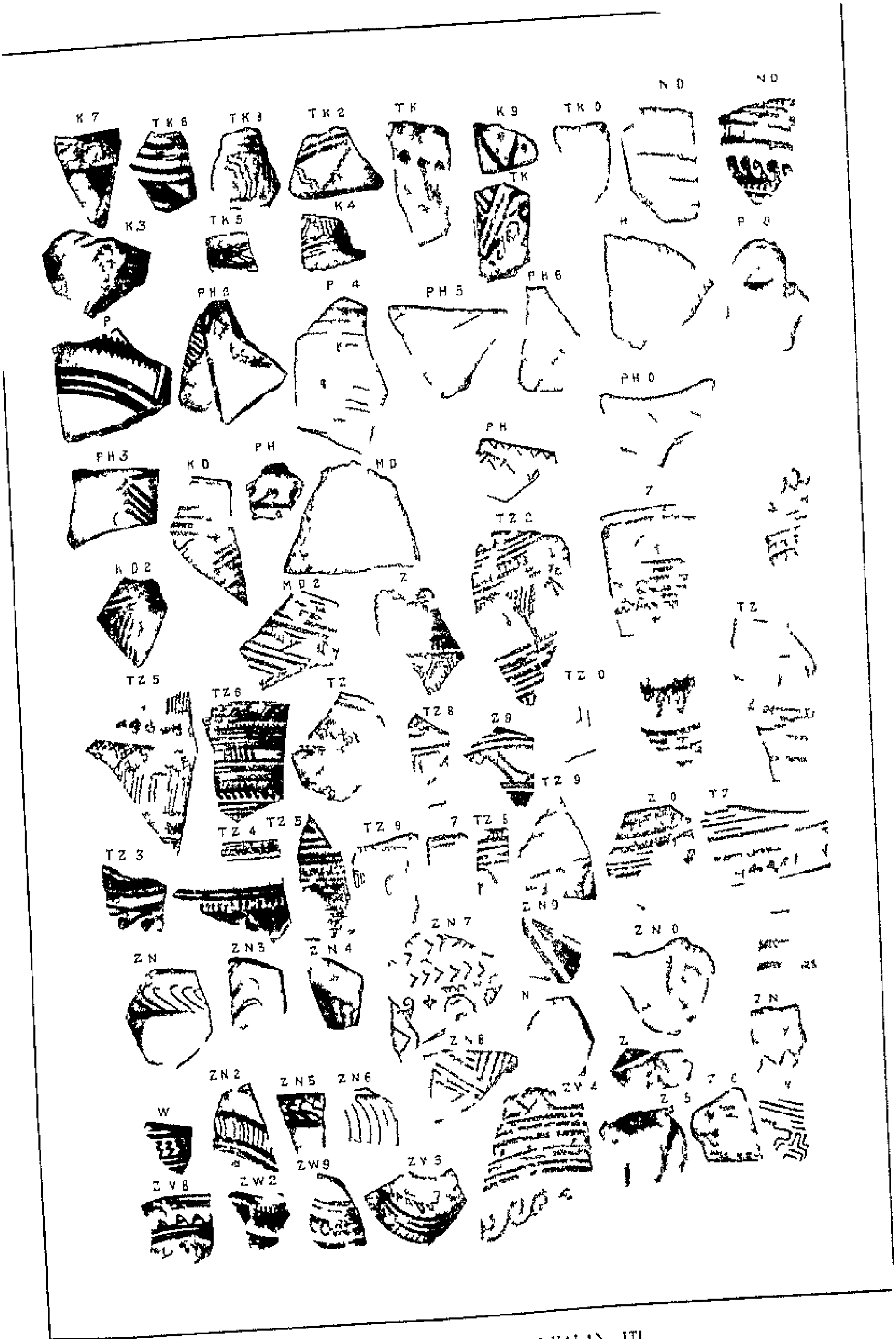
INDEX

By

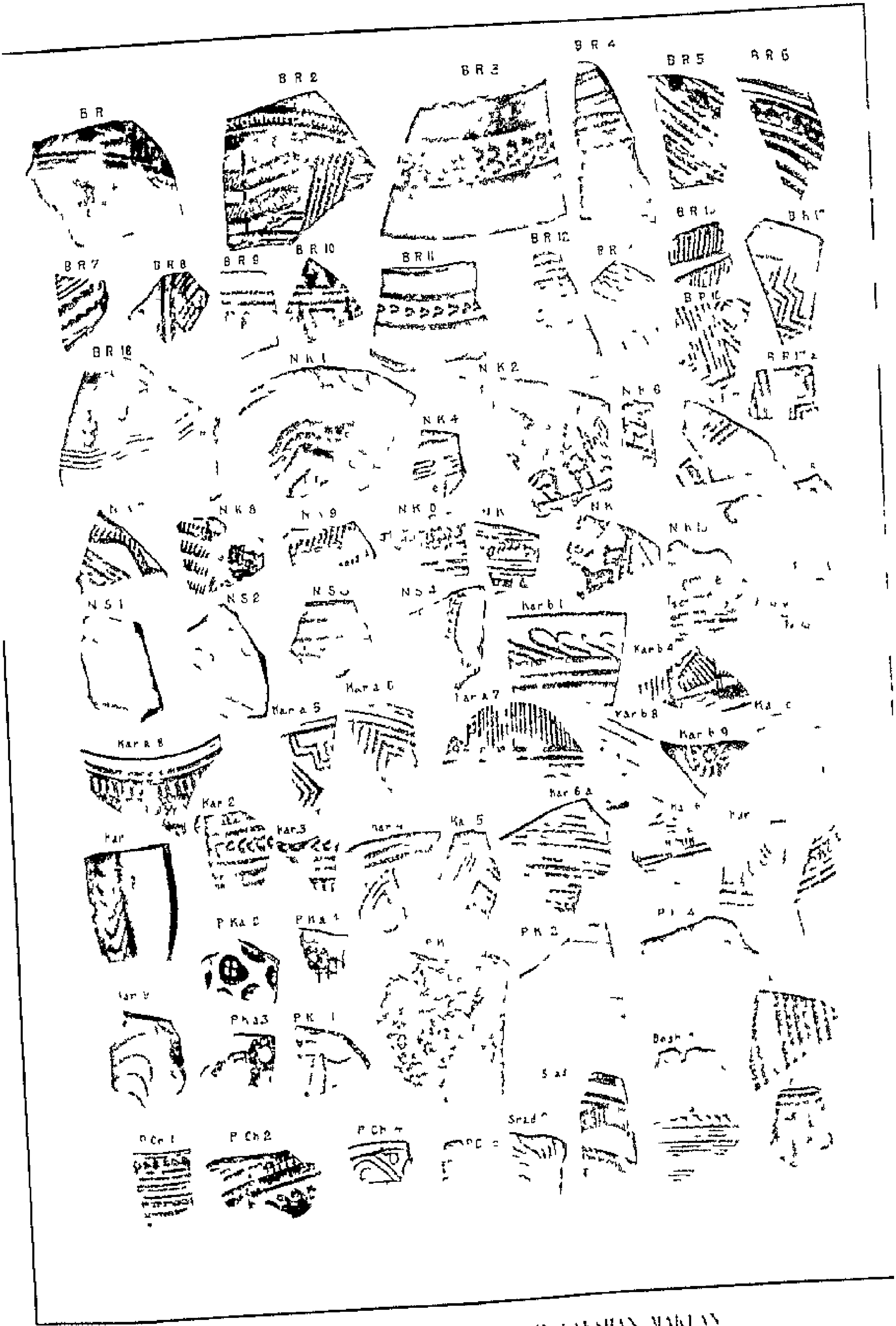
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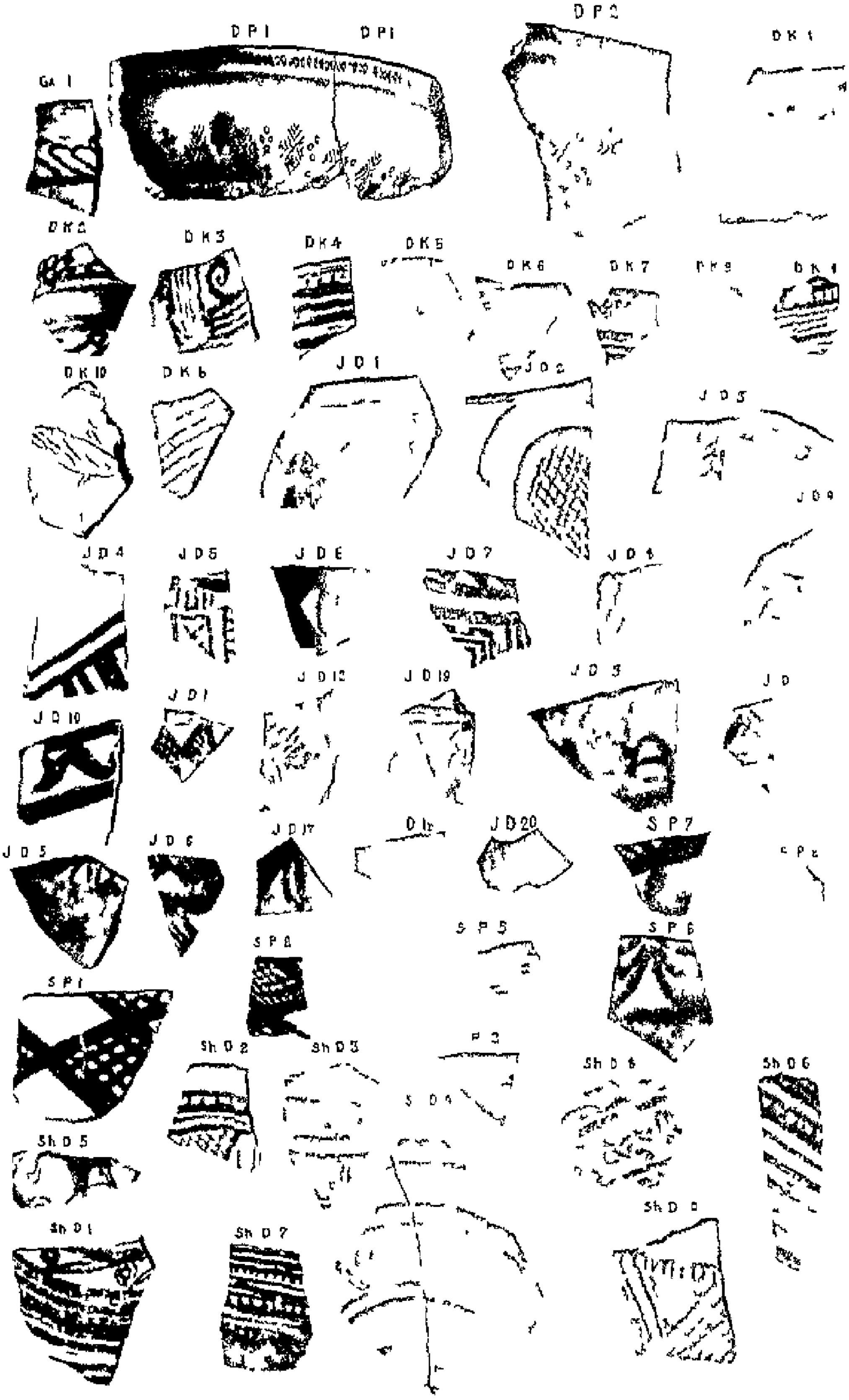
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PH 3
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K D 2
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Z V 8
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Z W 9
Z Y 3

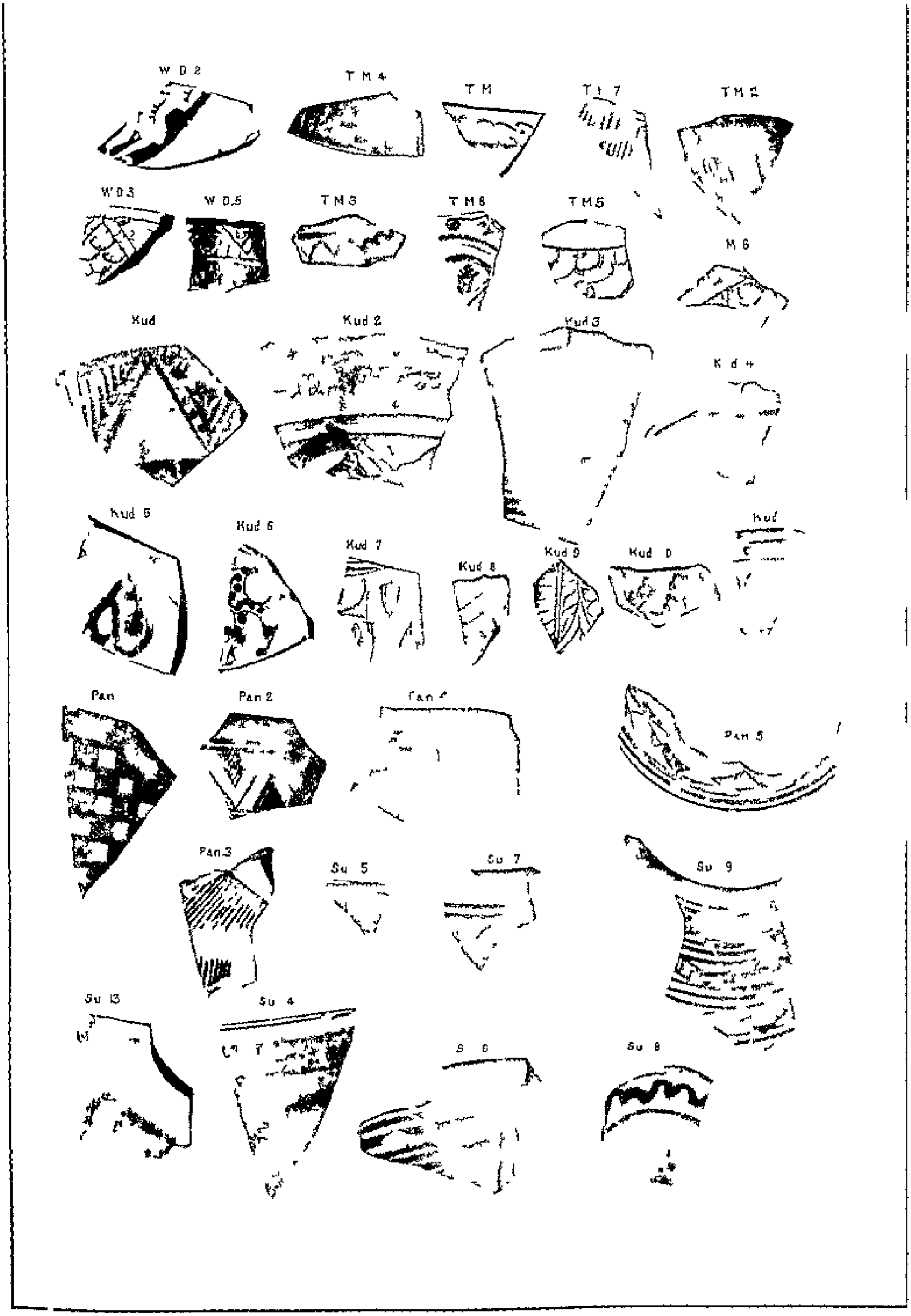


SPECIMENS OF POTTERY FROM SITES IN LAKSHAN MAKRAN

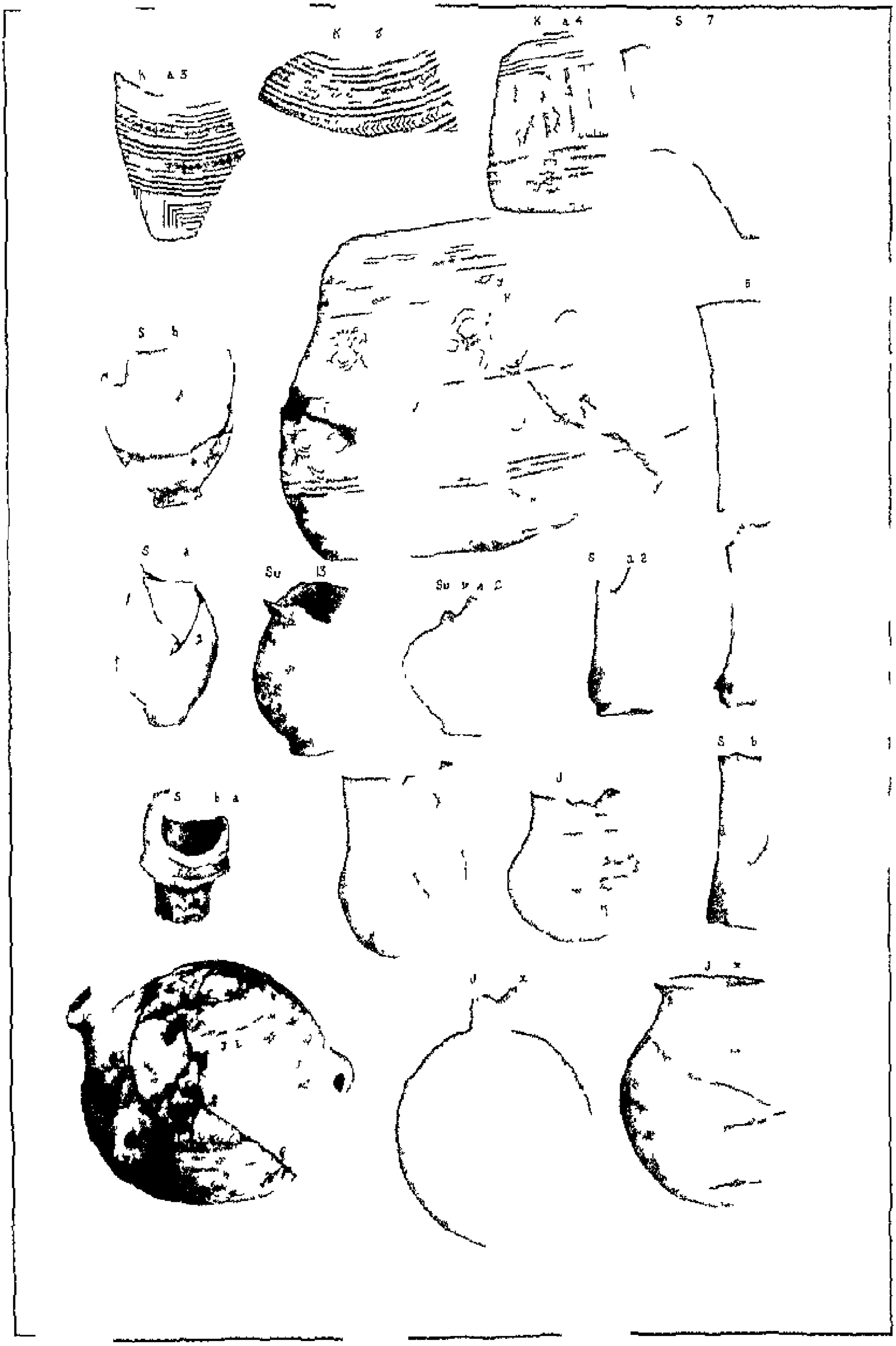


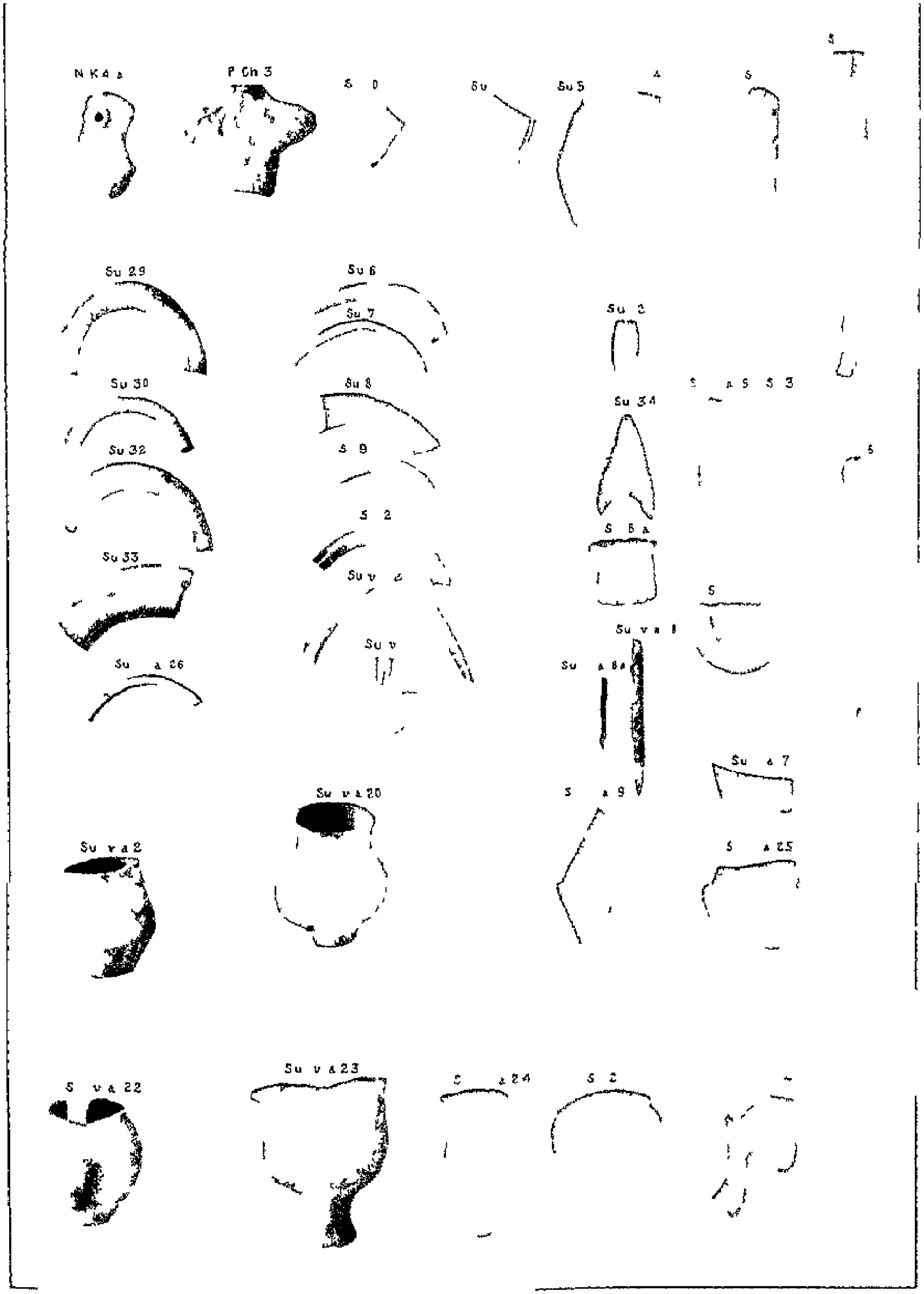
SPECIMENS OF POTTERY FROM SITES IN [illegible] MAKRAN

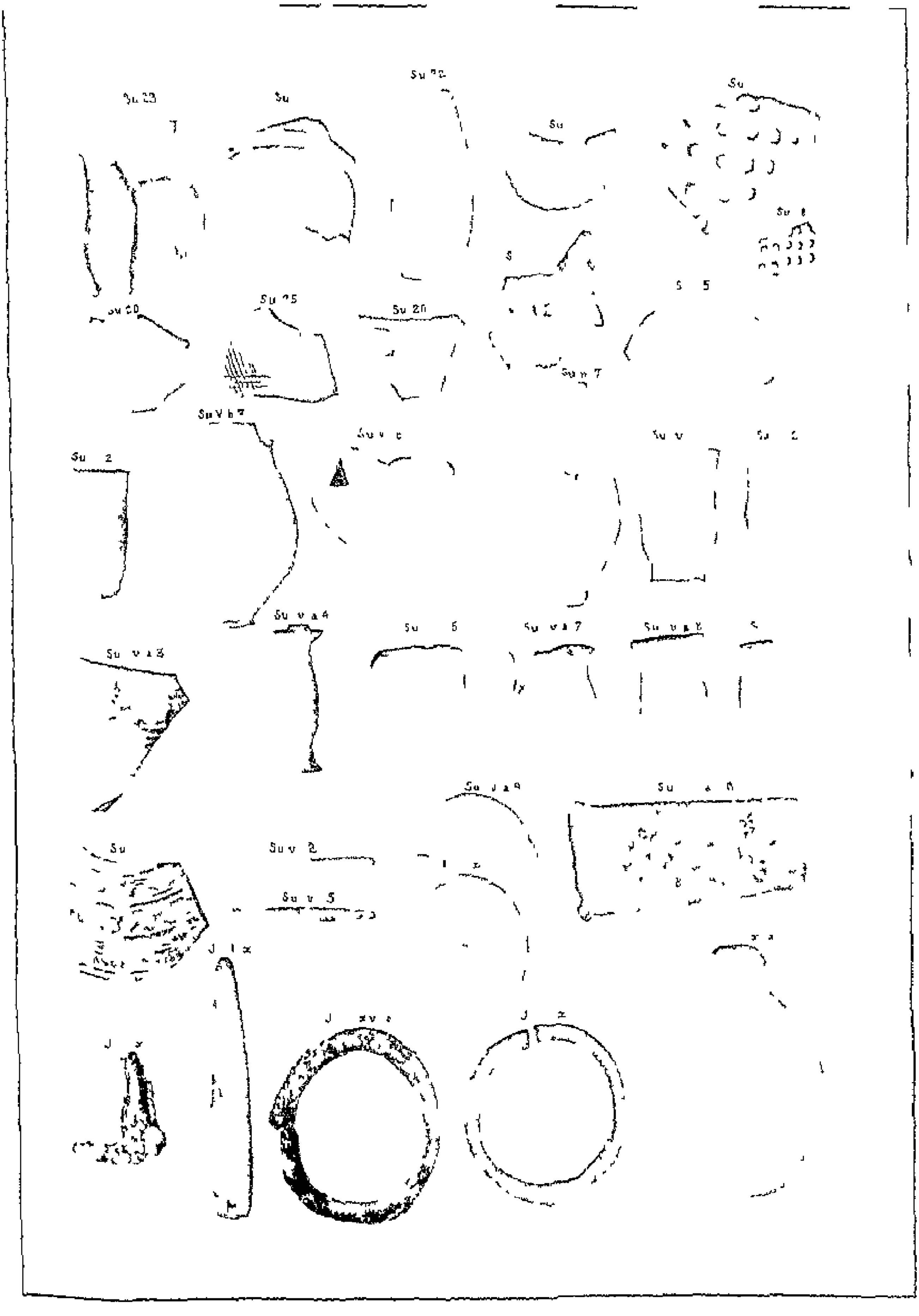
S. III



SPECIMENS OF POTTERY FROM SITES IN KŪLANCH AND DASHT VALLEY, MAKRAN

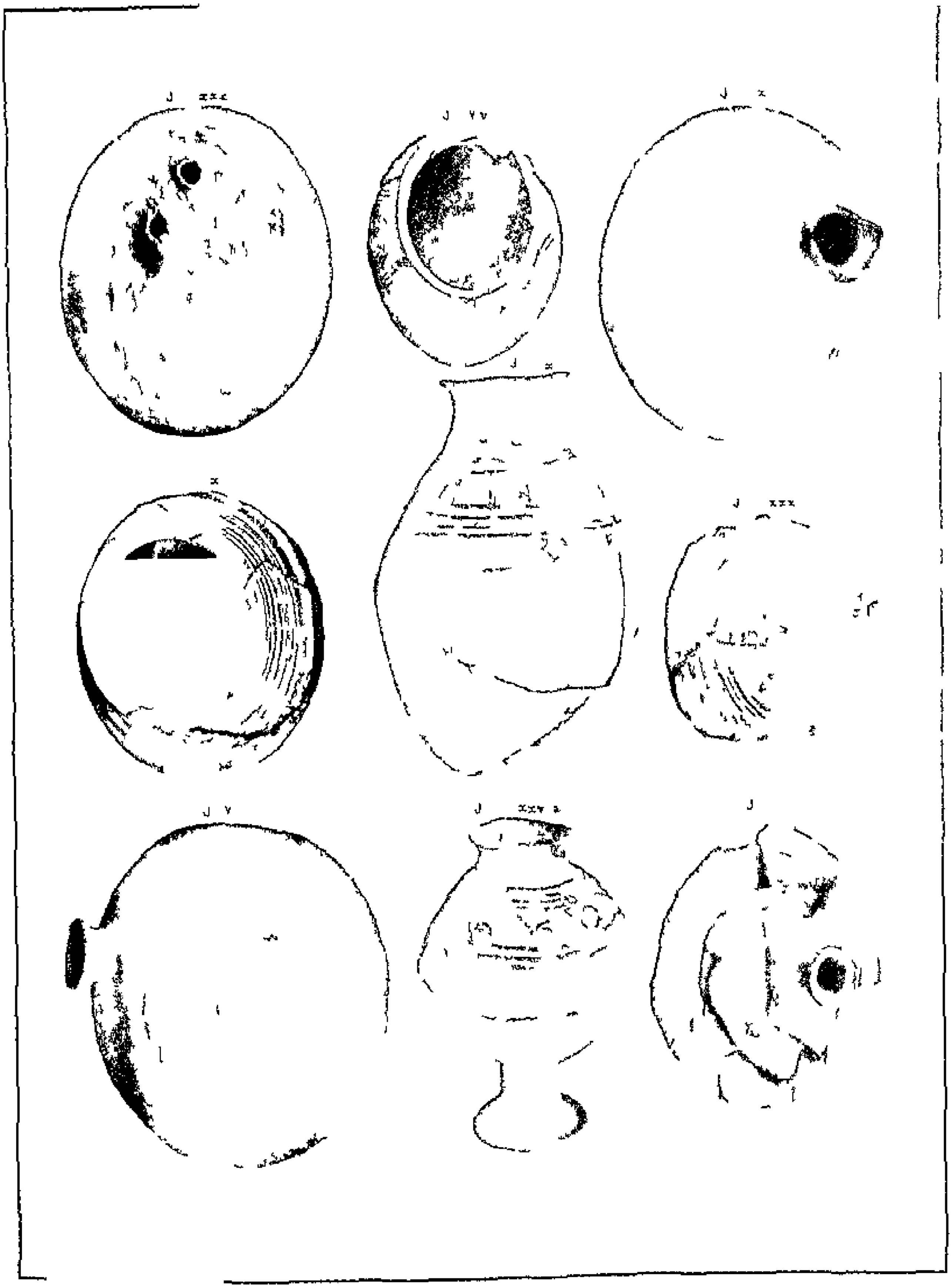



N K 4 a
P Ch 3
Su 5
Su 29
Su 6
Su 7
Su 30
Su 8
Su 34
Su 32
Su 33
Su v a 20
Su v a 2
Su v a 23
S v a 22



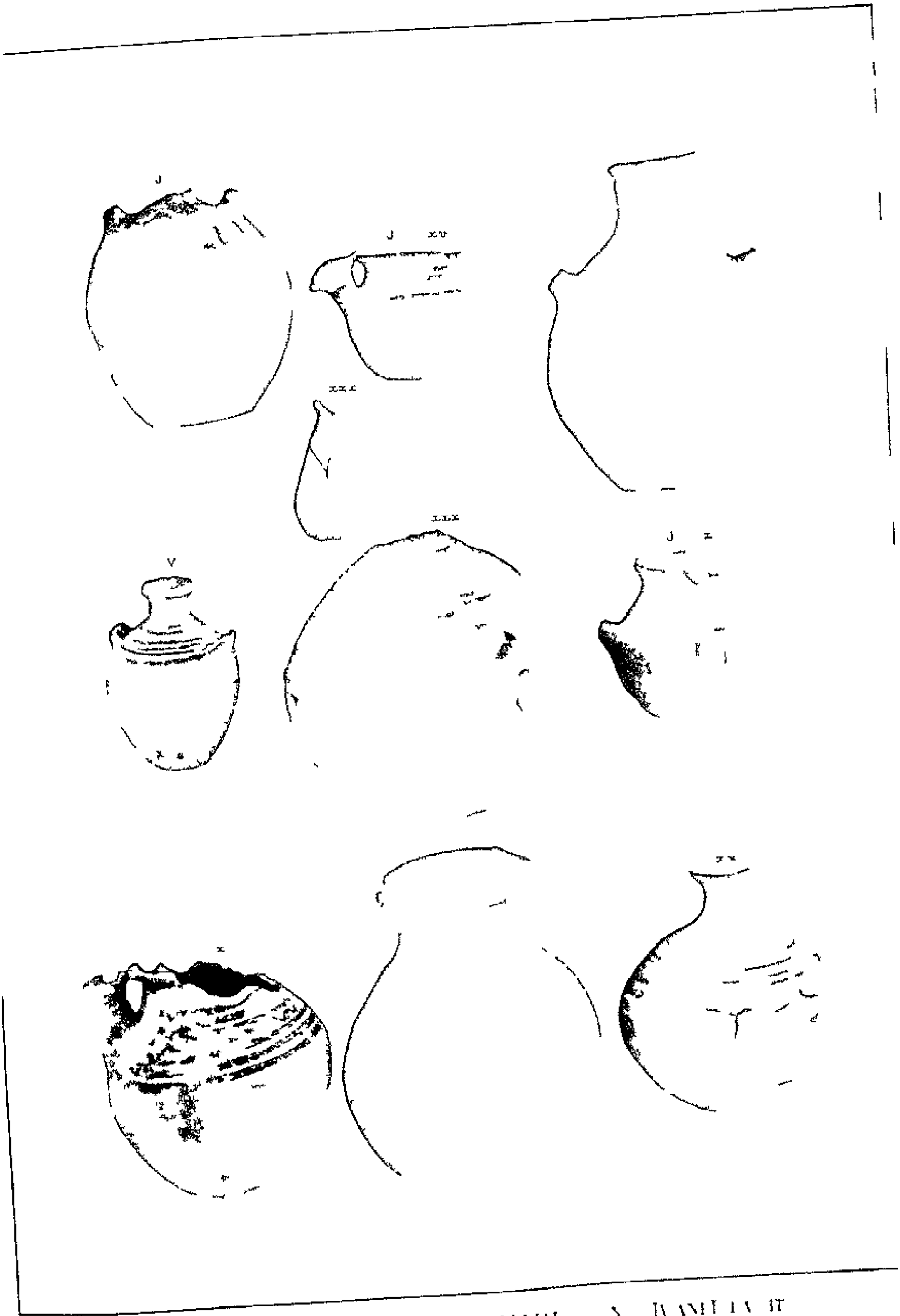
SPECIMENS OF OBJECTS IN CLAY, STONE AND METAL FROM SUTKAGEN DOR AND JIWANRI, DASHT

S. 01

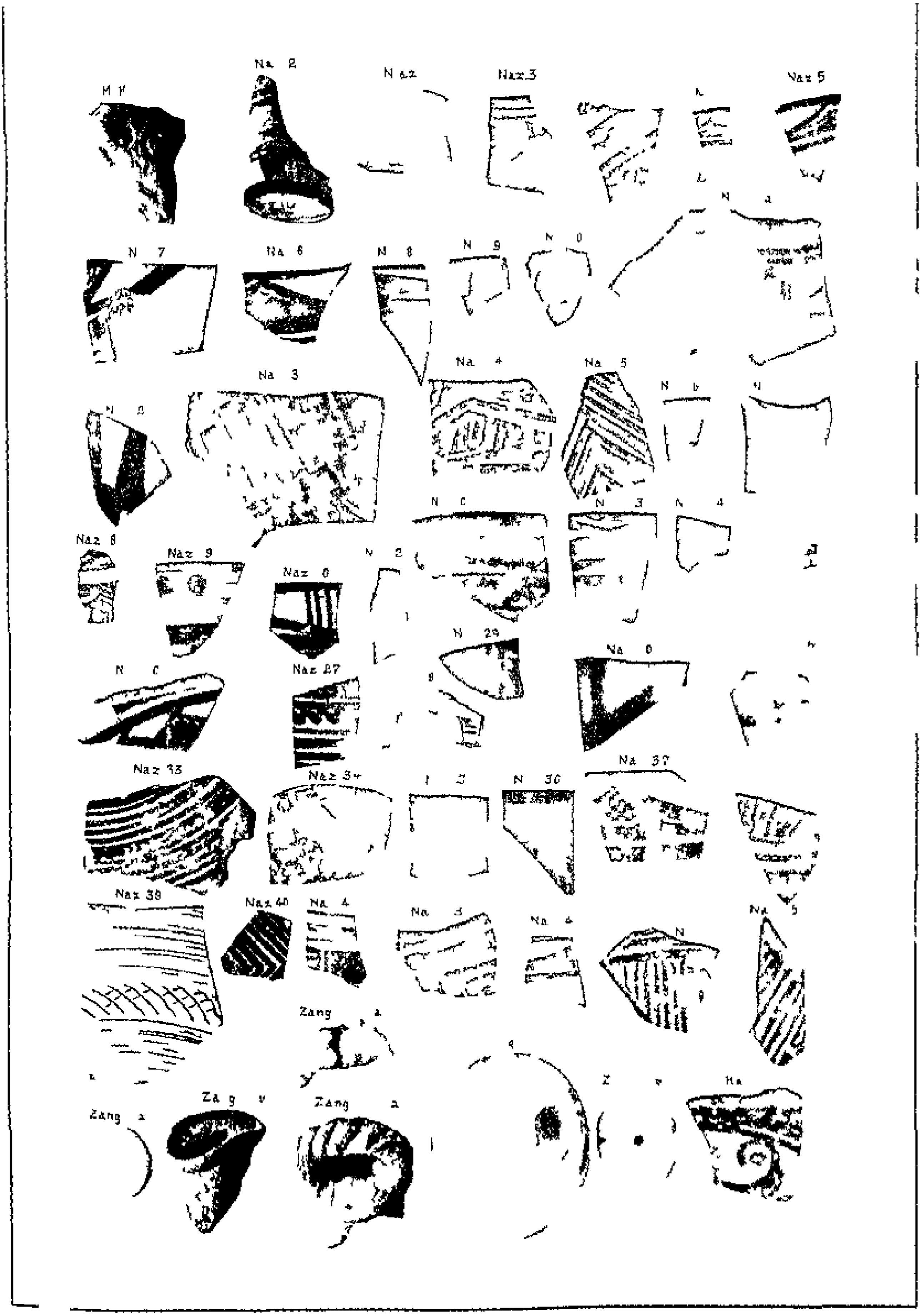


SPECIMENS OF POTTERY VESSELS FROM [illegible] CAIRNS [illegible]

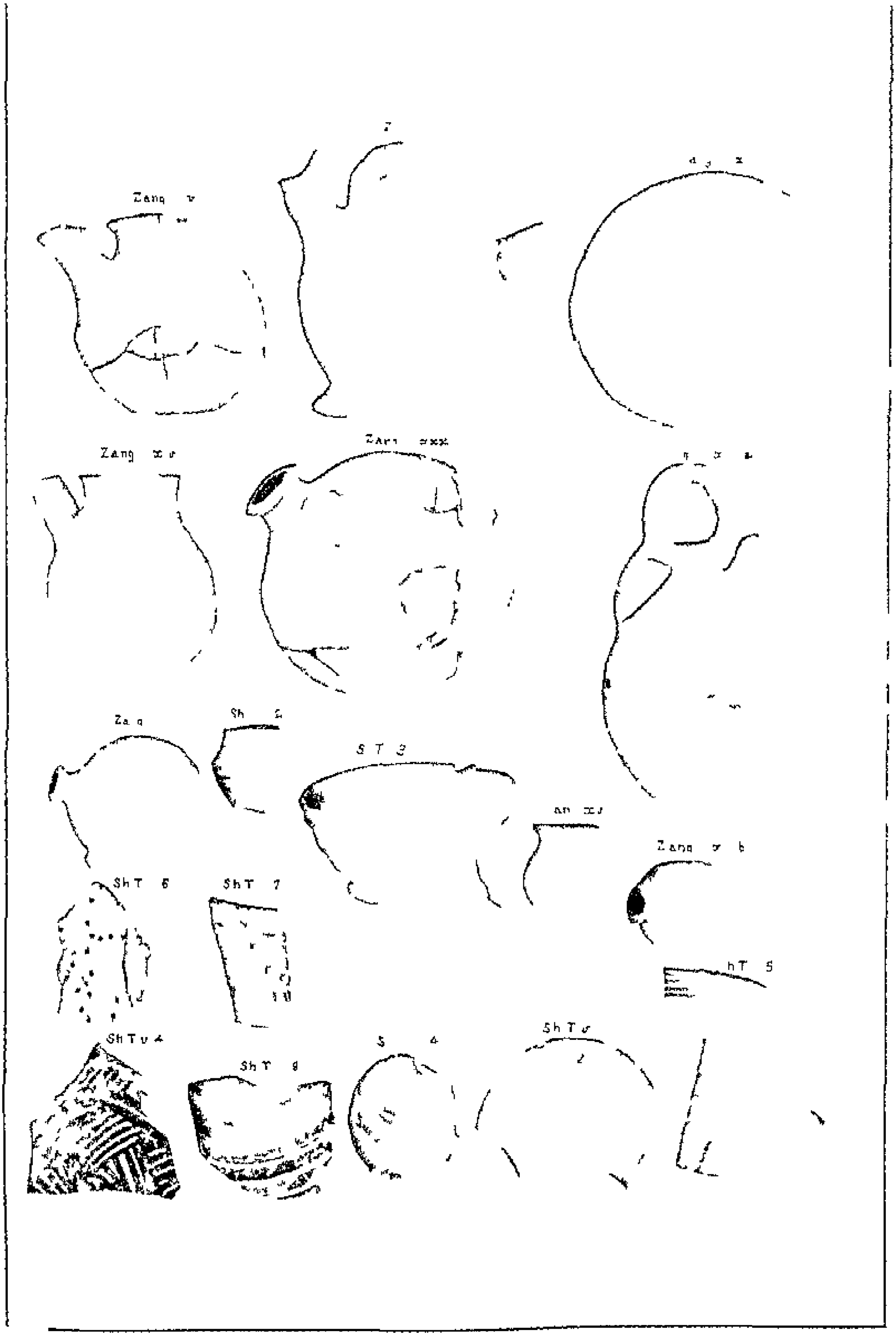
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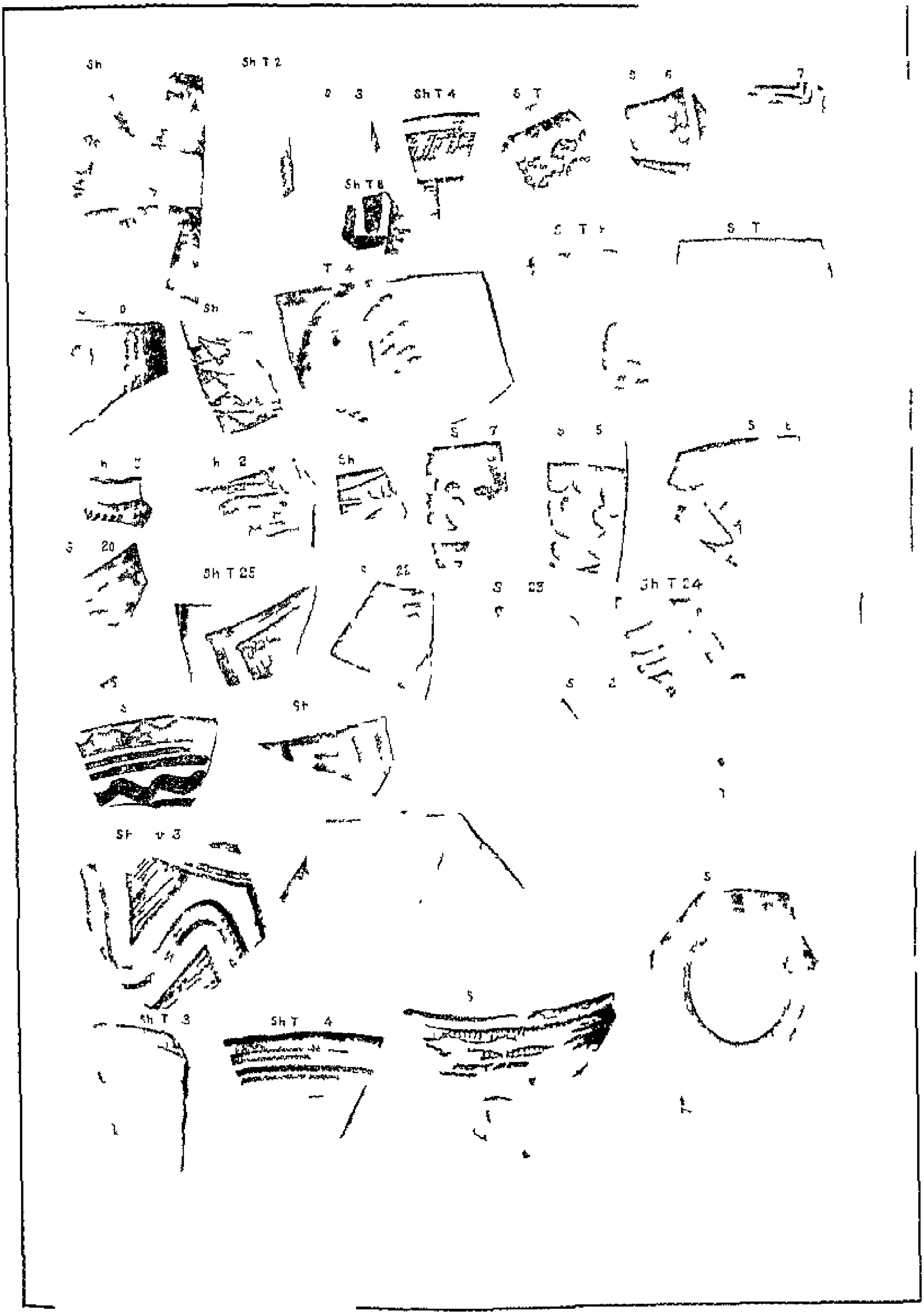
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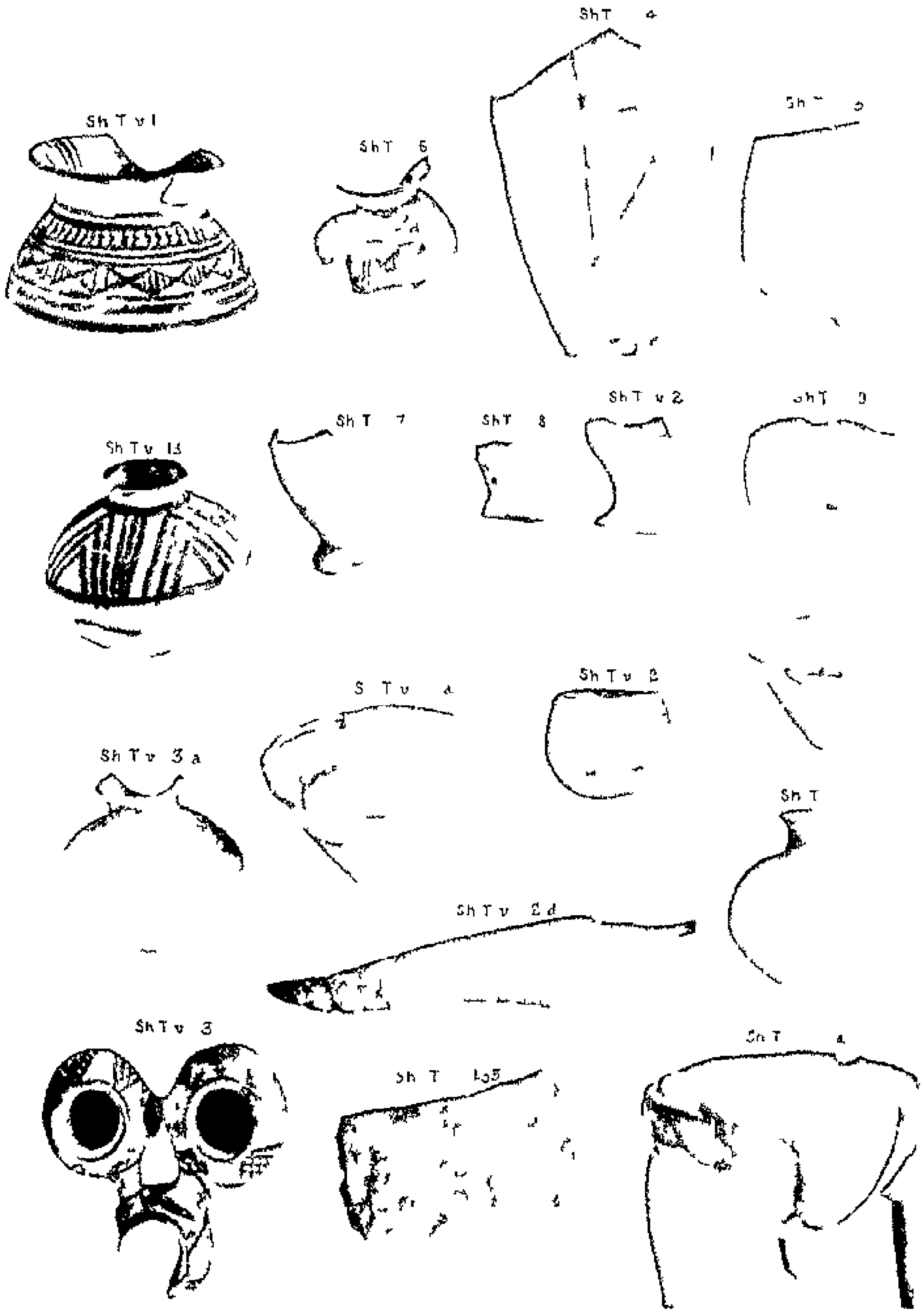
SPECIMENS OF POTTERY ETC. FROM NAZIRABAD AND OTHER SITES IN NIHING AND [illegible] VALLEY MAKRAN



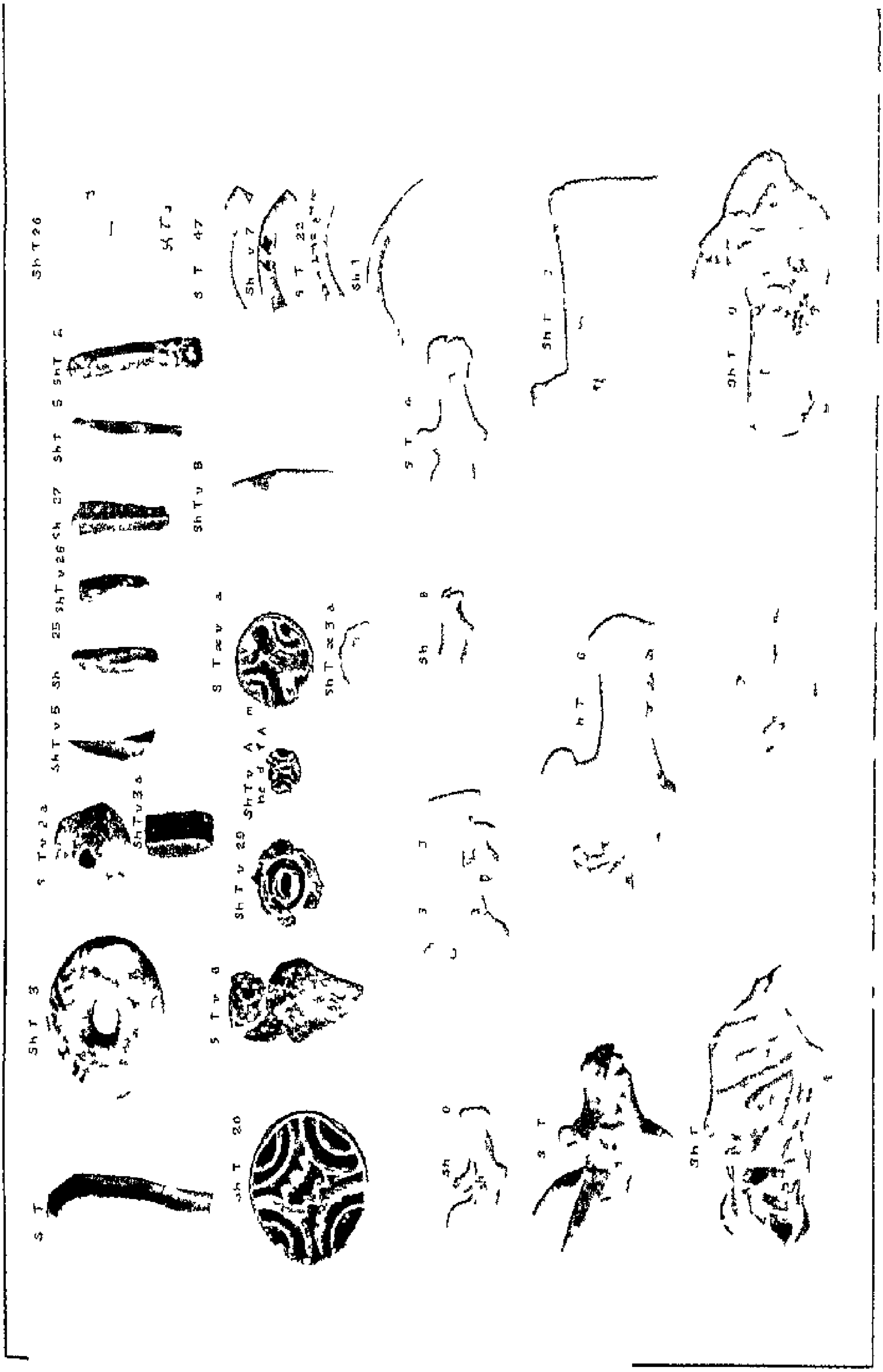
[illegible] POTTERY FROM ZANGIAN AND SHAHI TUMP [illegible]

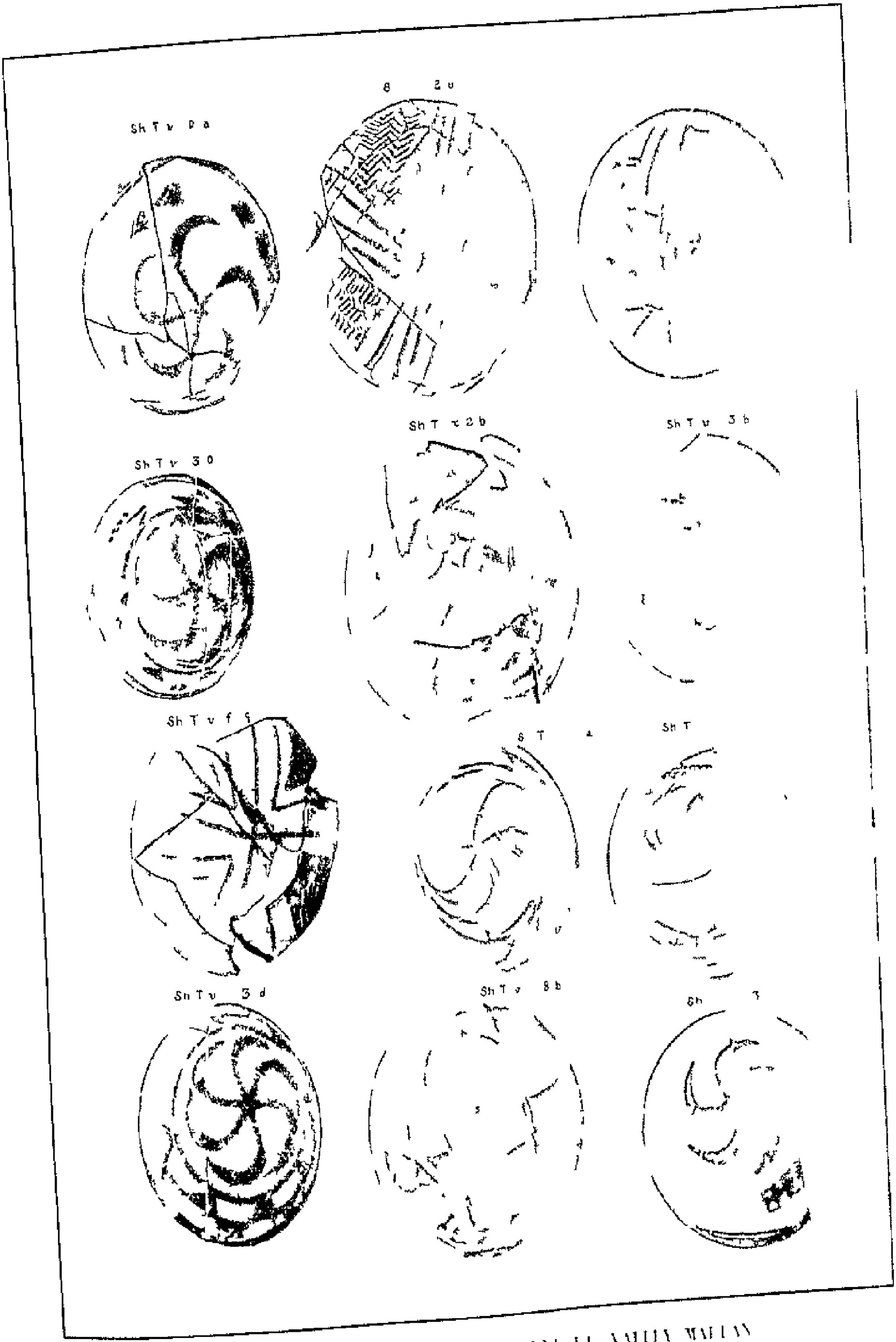


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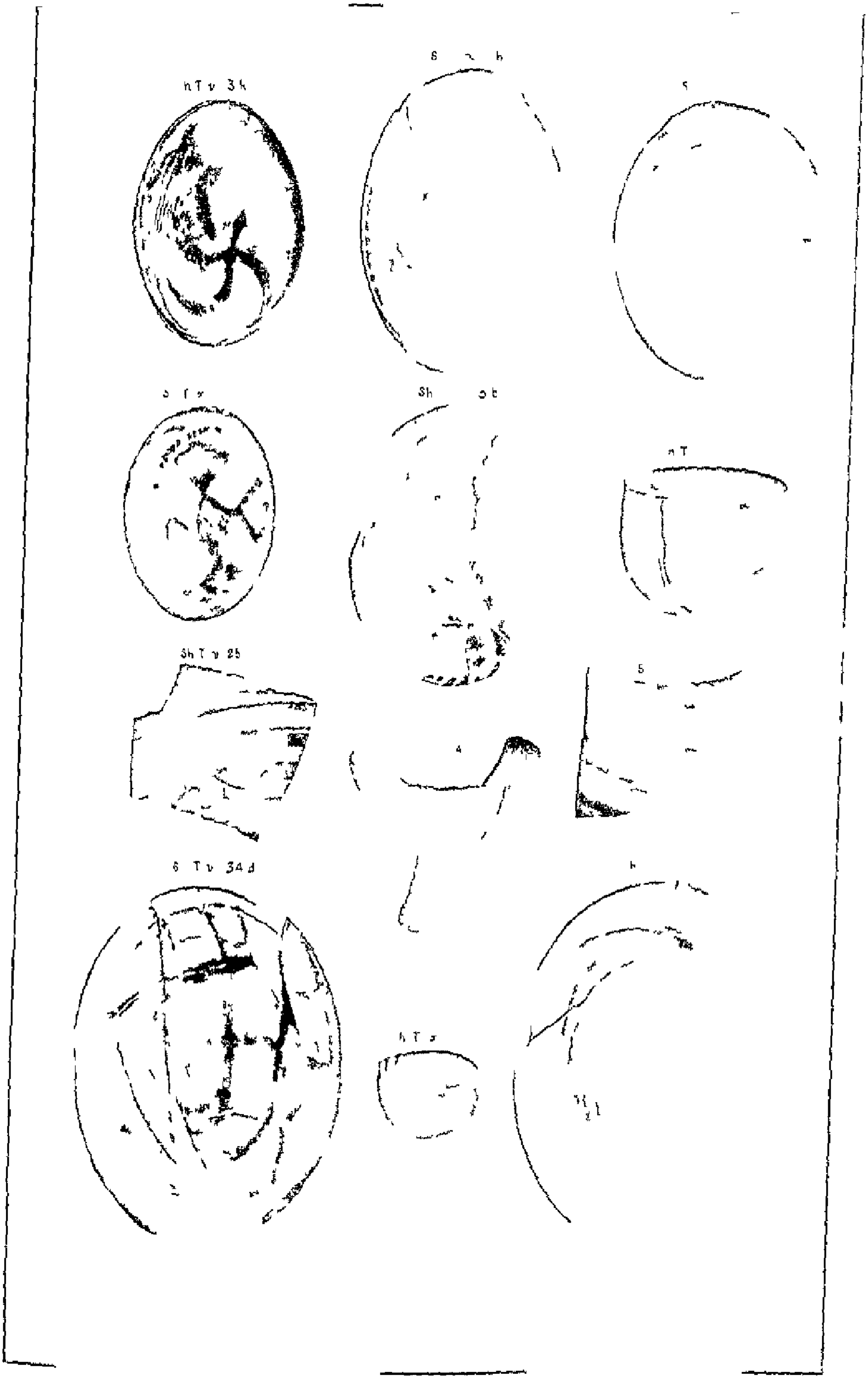


SPECIMENS OF POTTERY AND OBJECTS IN STONE AND COPPER FROM SHAHI TUMP MOUND, KECH VALLEY, MAKRAN

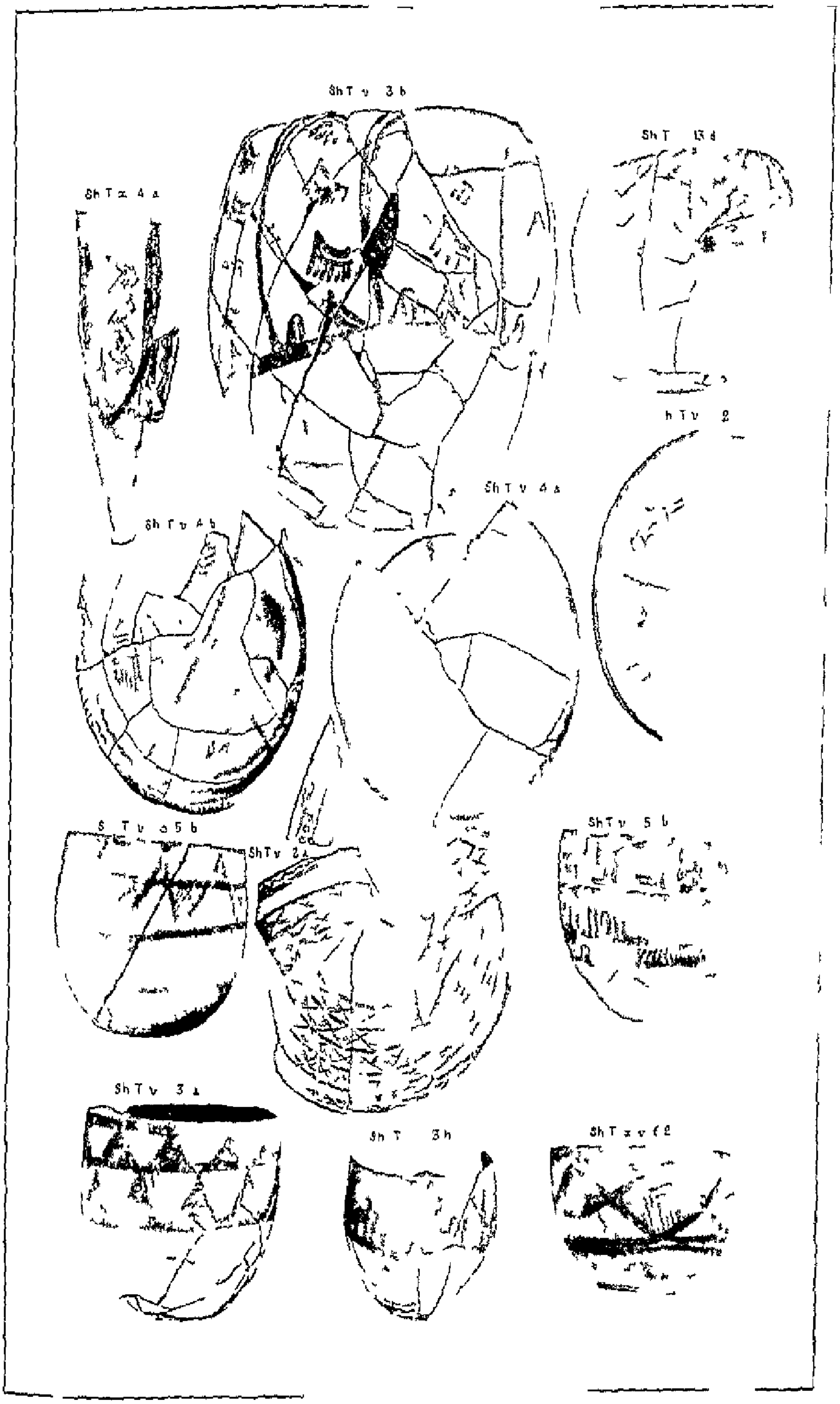




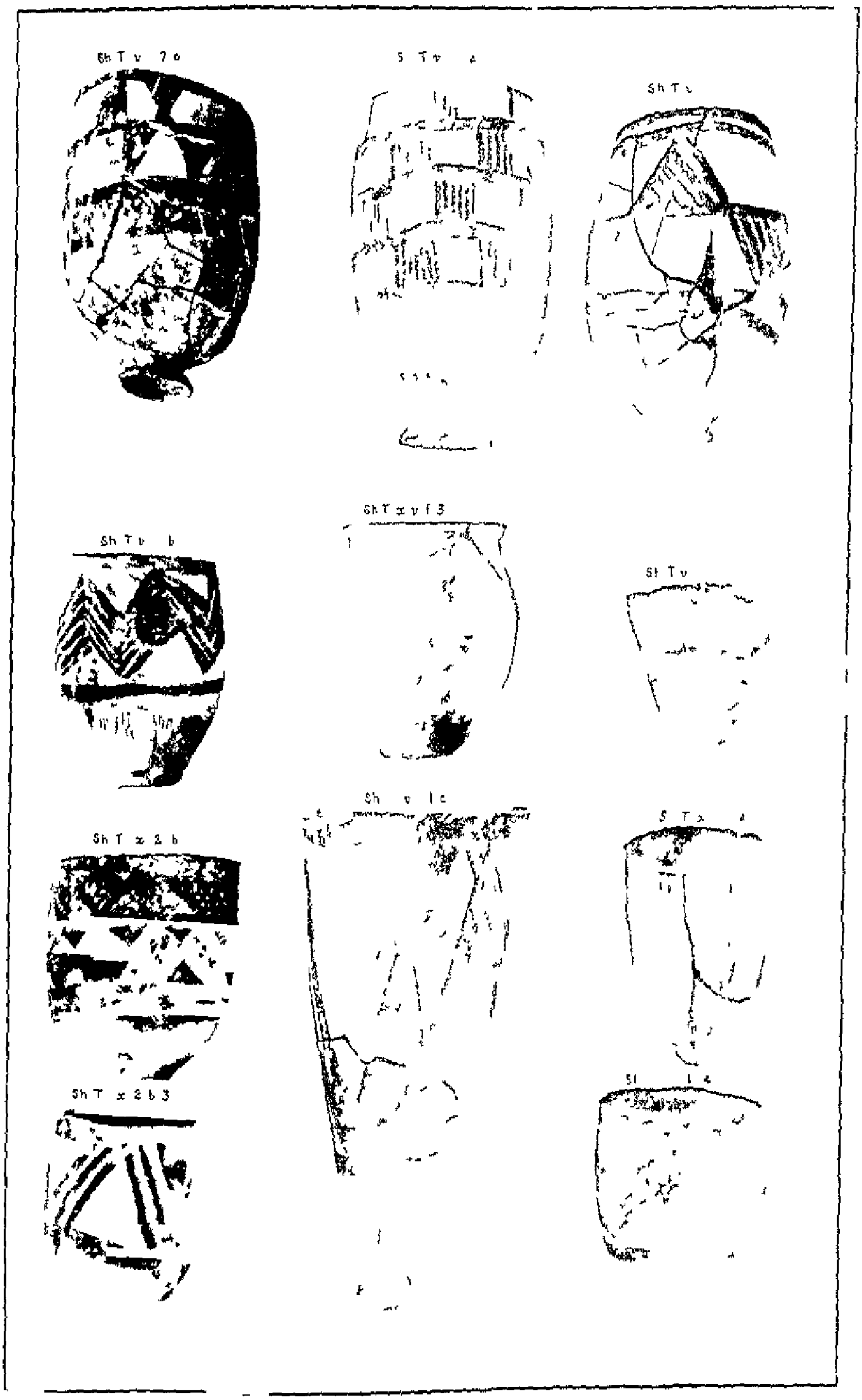
FUNERAL POTTERY FROM SHAHI TUMP MOUND ... VALLEY MAKRAN



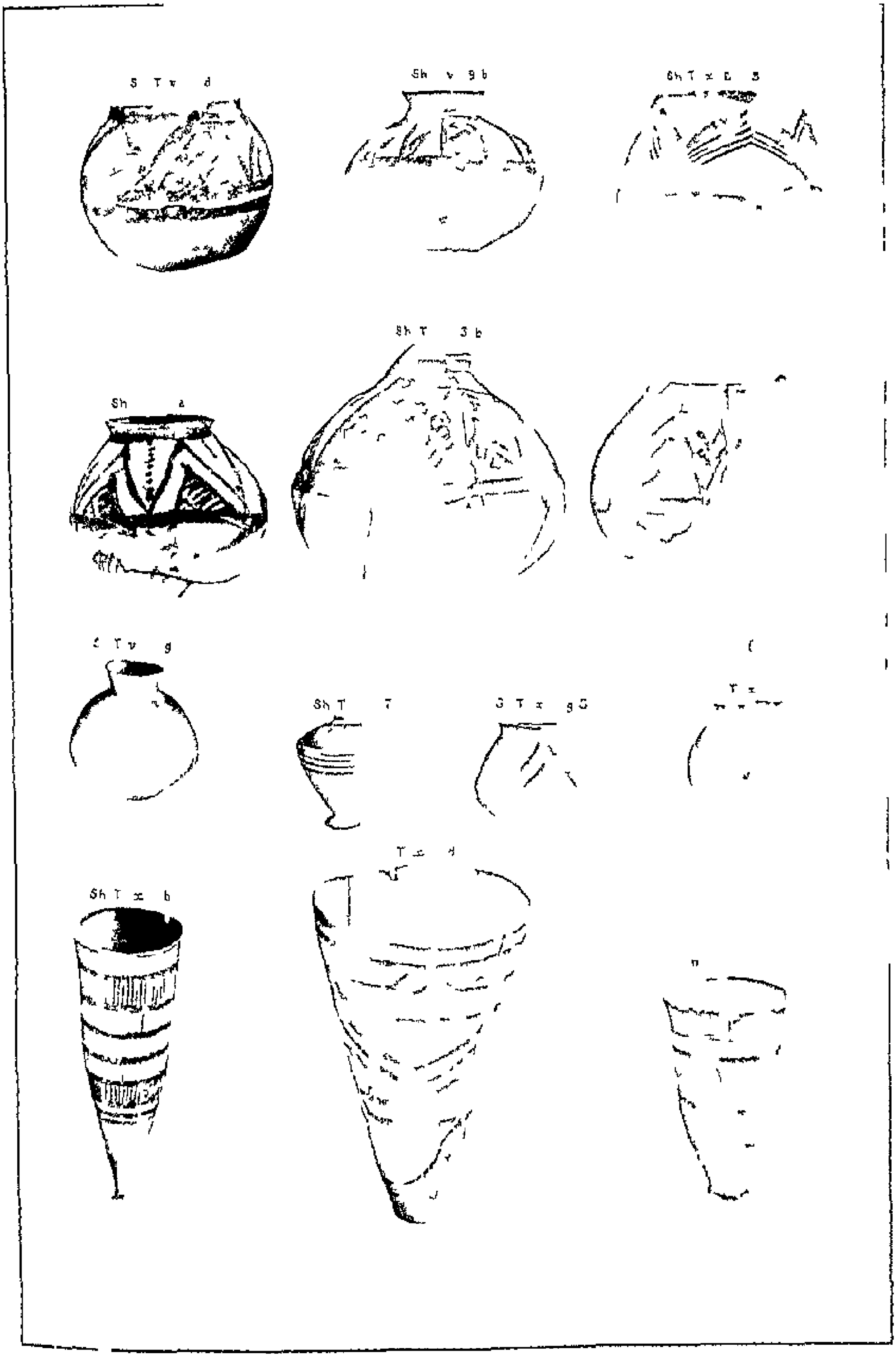
FUNERARY POTTERY FROM [illegible]



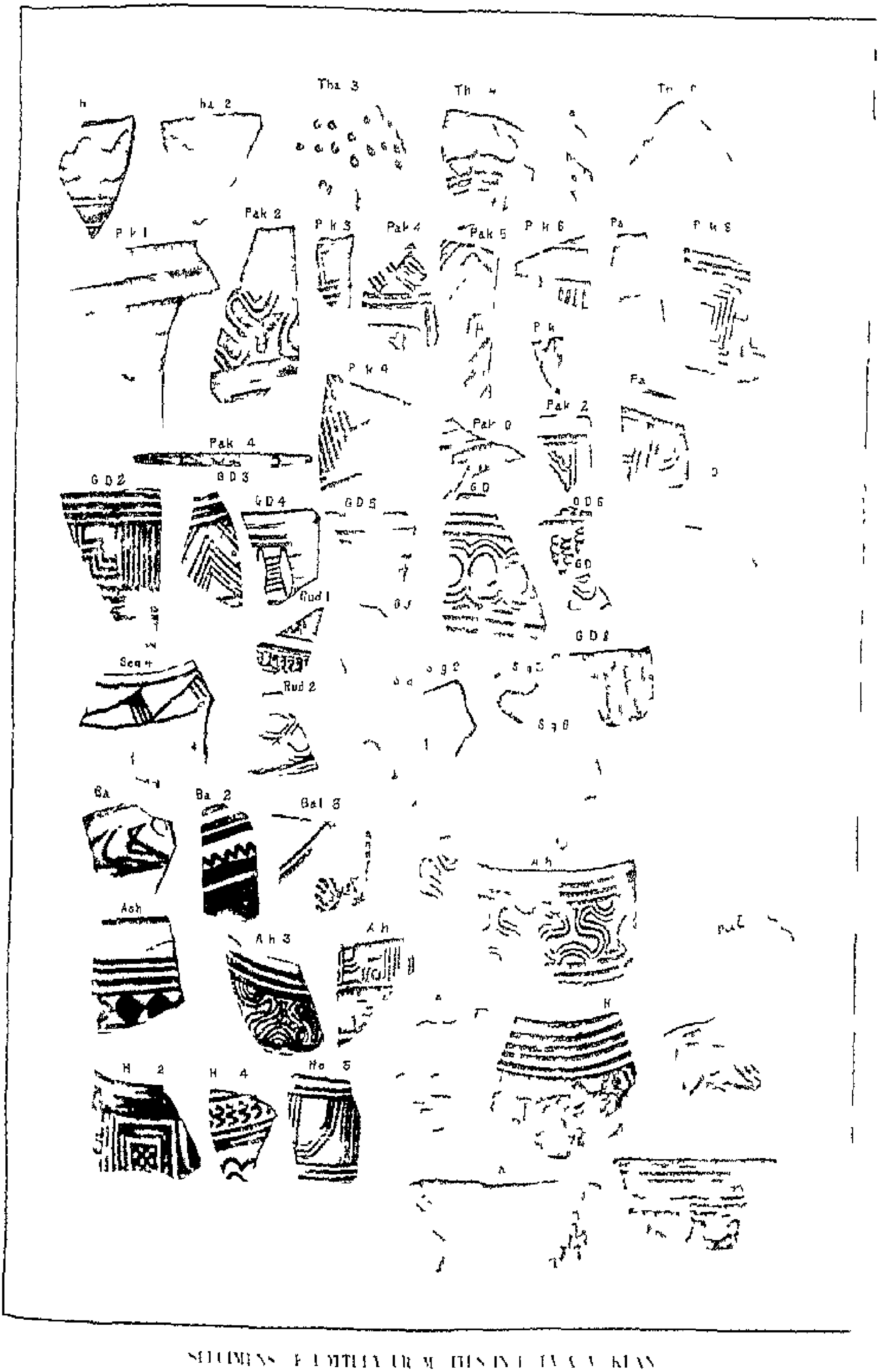
FUNERAL POTTERY FROM SHAHI-TUMP MOUND, KECH VALLEY, MAKRAN



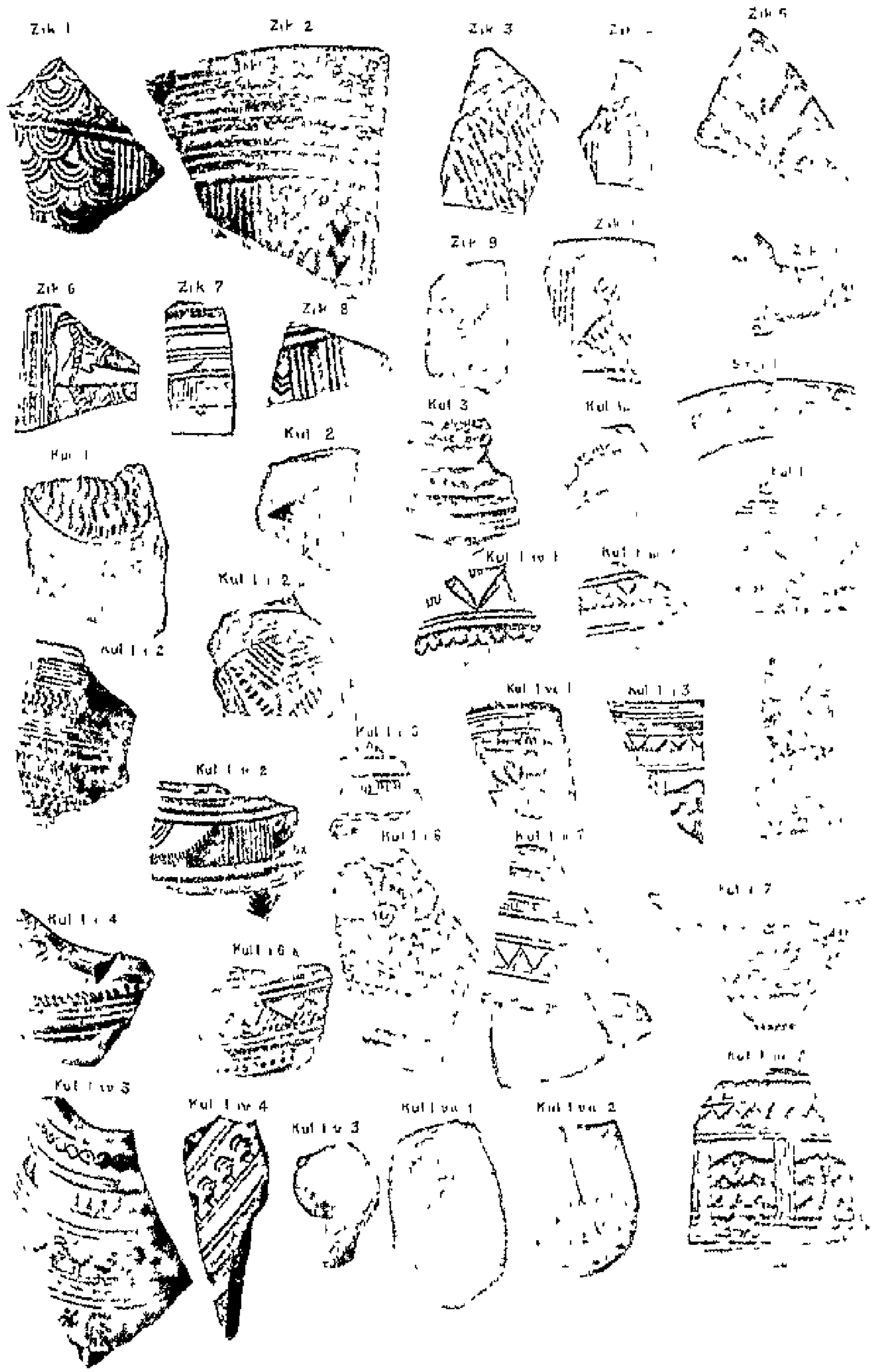
FUNERARY POTTERY FROM SHAHI TUMP MOUND, KECH VALLEY, MAKRAN



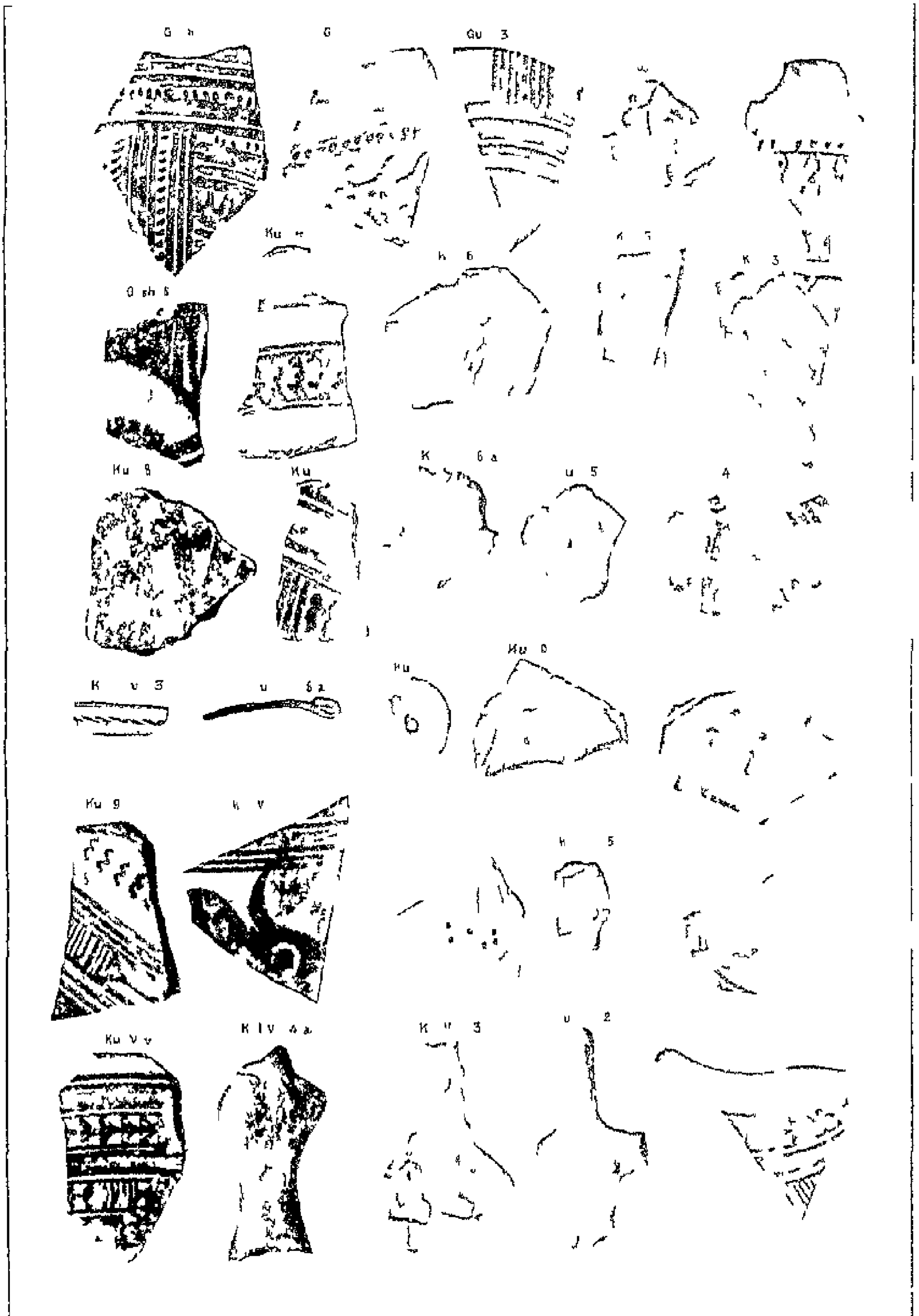
FUNERAL POTTERY FROM SHAHI TUMP MOUND, KECH VALLEY, MAKRAN



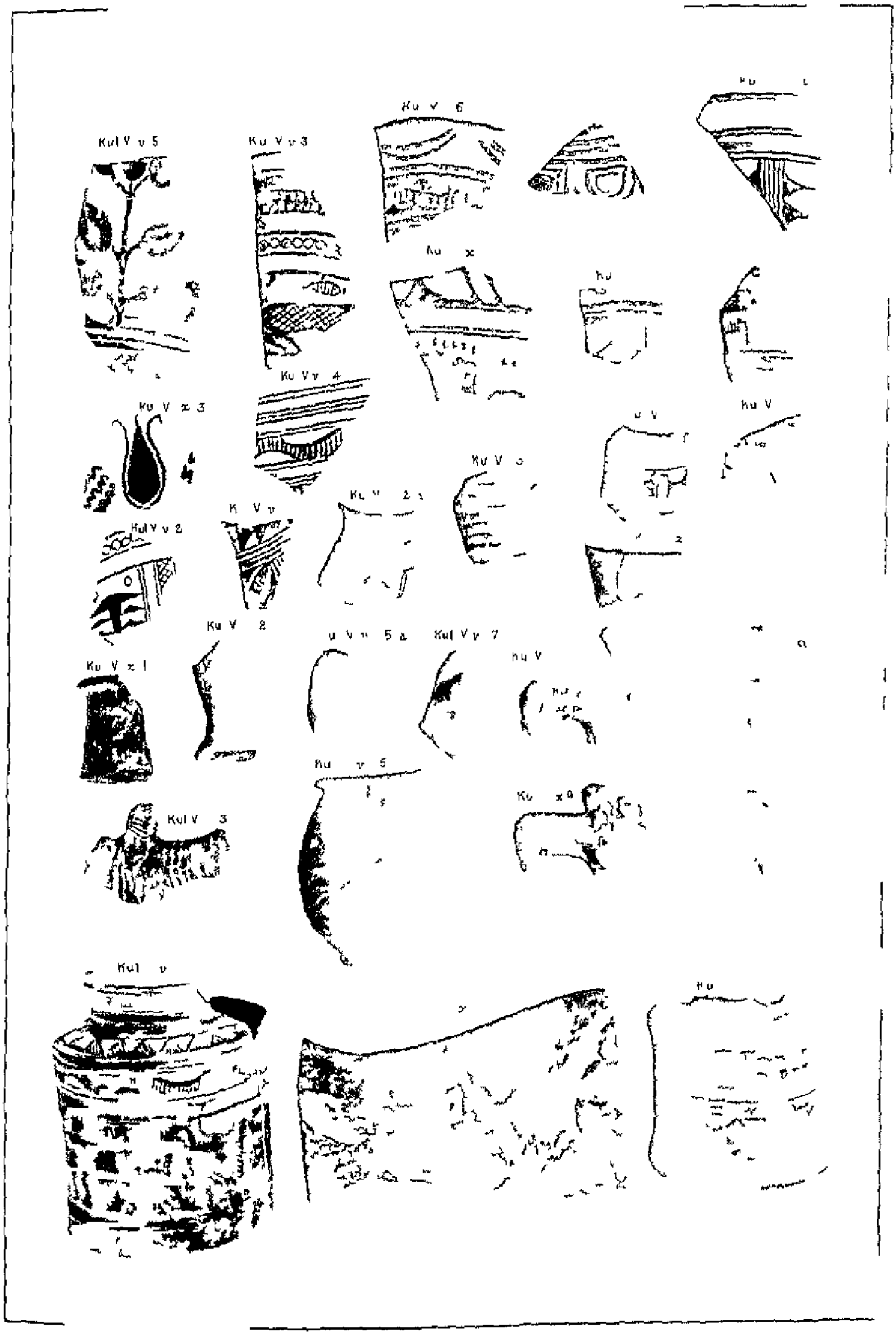
SPECIMENS OF POTTERY FROM SITES IN [illegible] KHAN



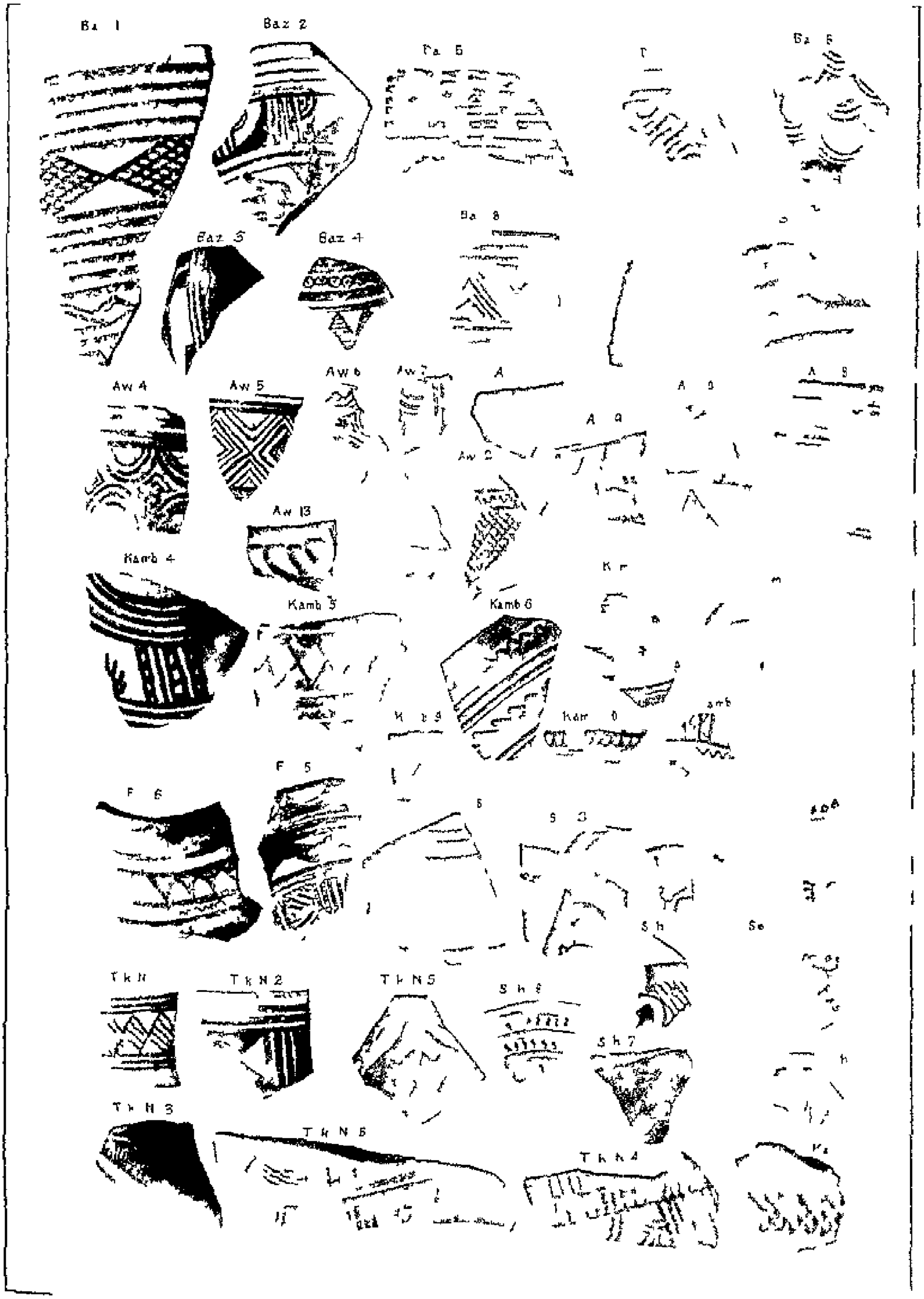
SPECIMENS OF POTTERY FROM KULLI AND OTHER SITES IN KOLWA MAKRAN



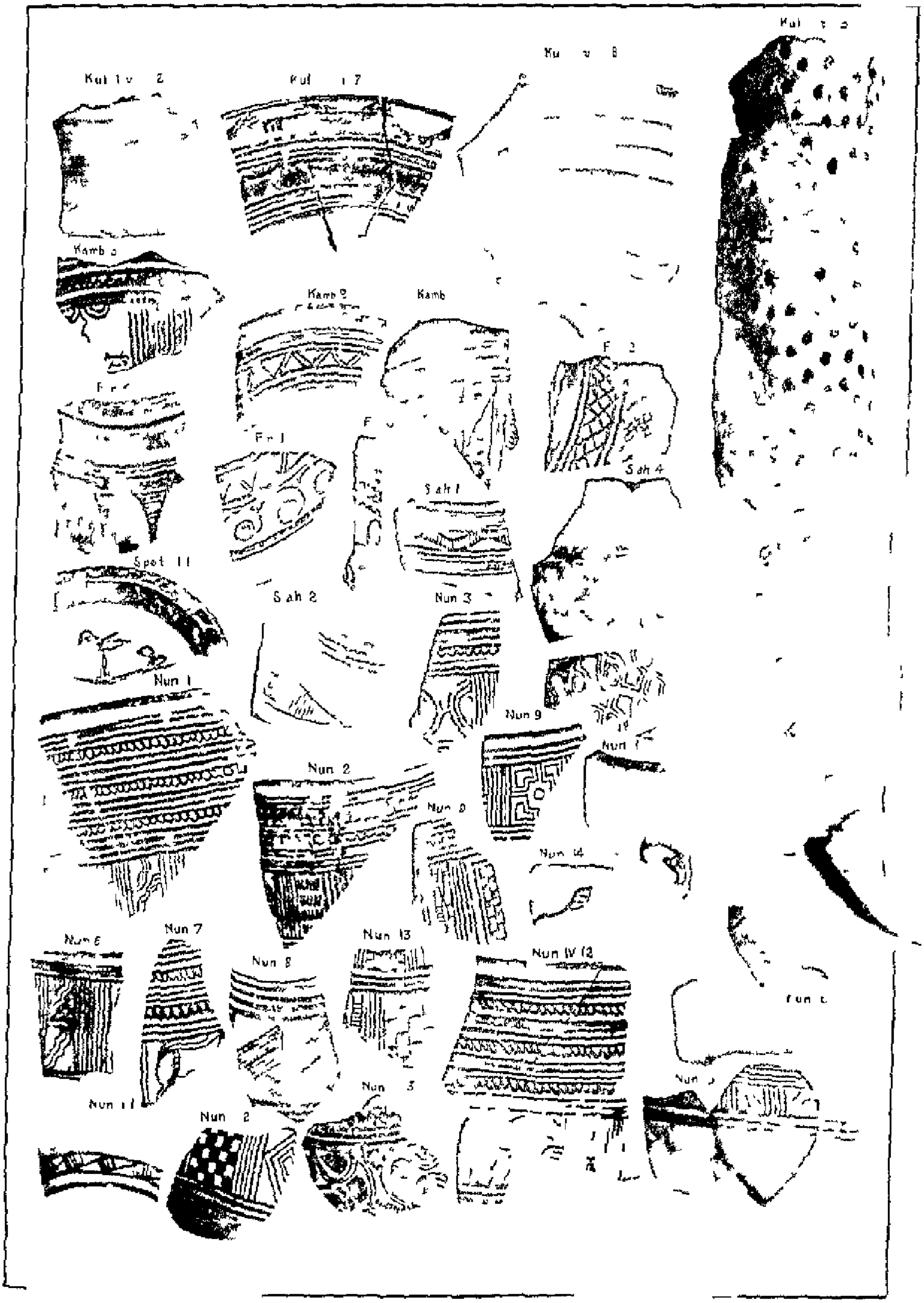
SPECIMEN OF POTTERY AND OBJECTS IN CLAY AND COPPER [illegible]
MAURYAN



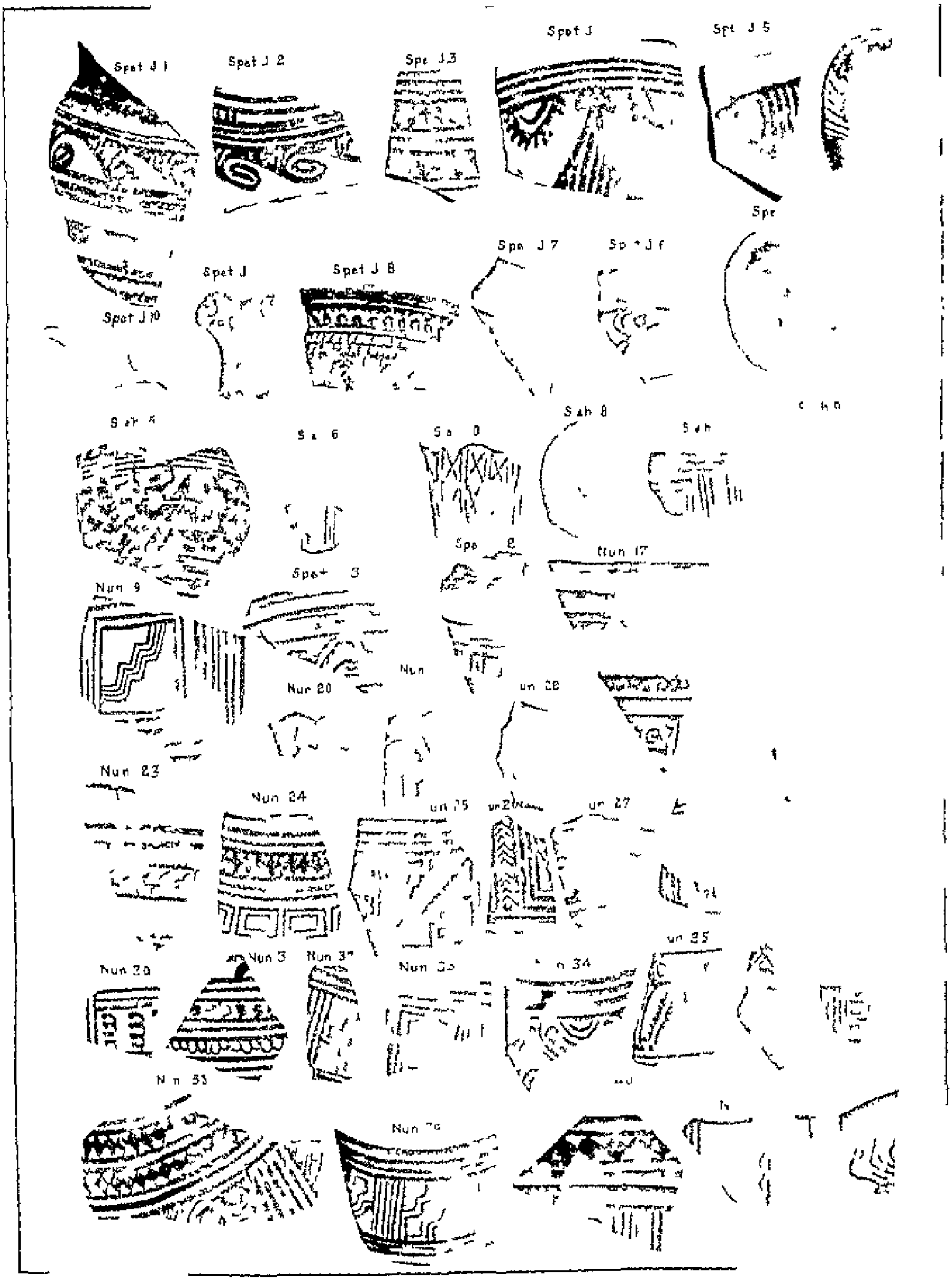
SPECIMENS OF POTTERY ALSO OBJECTS IN STONE AND CLAY [illegible]



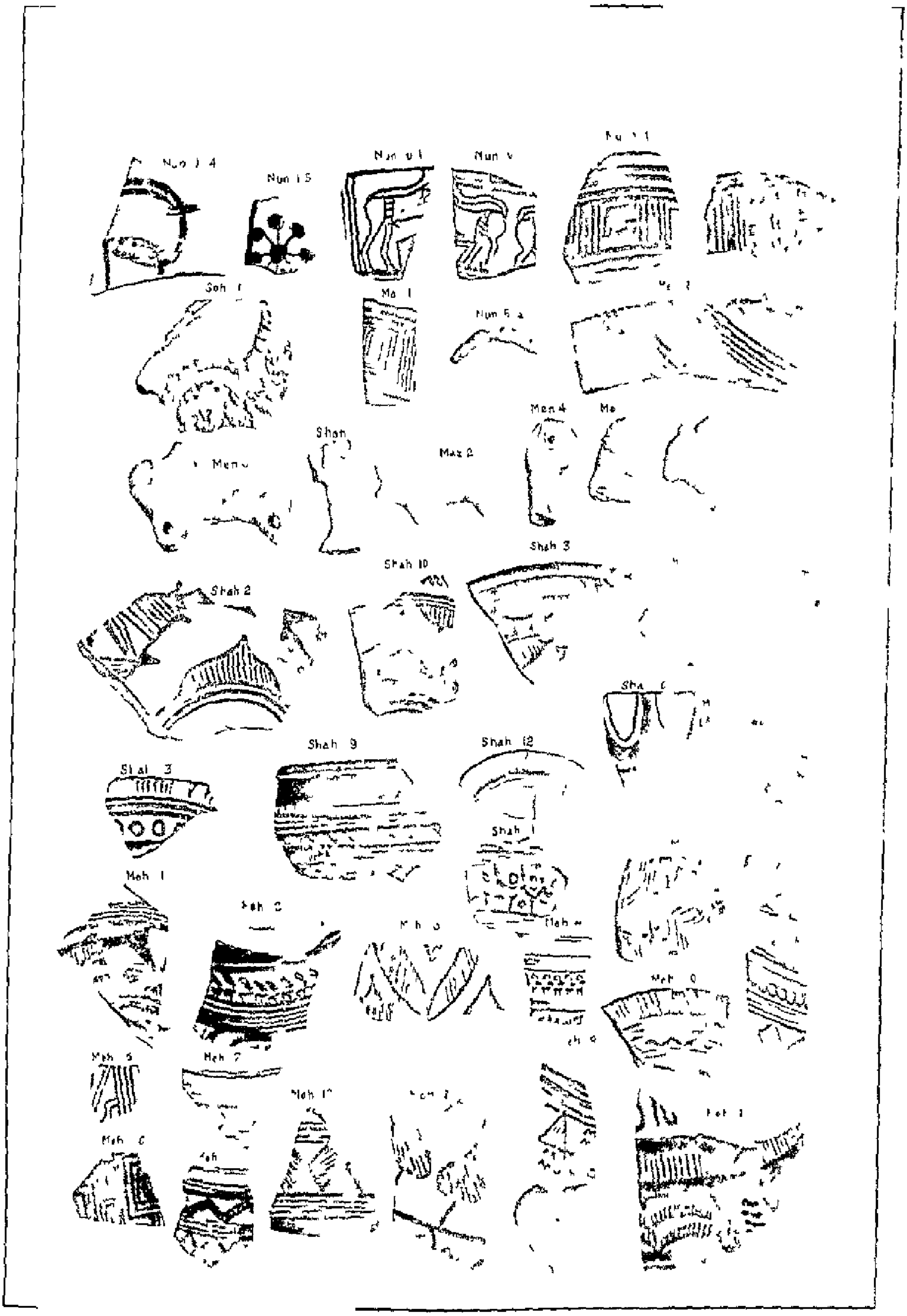
SPECIMENS OF POTTERY FROM SITES [illegible] AWARAN AN[illegible]



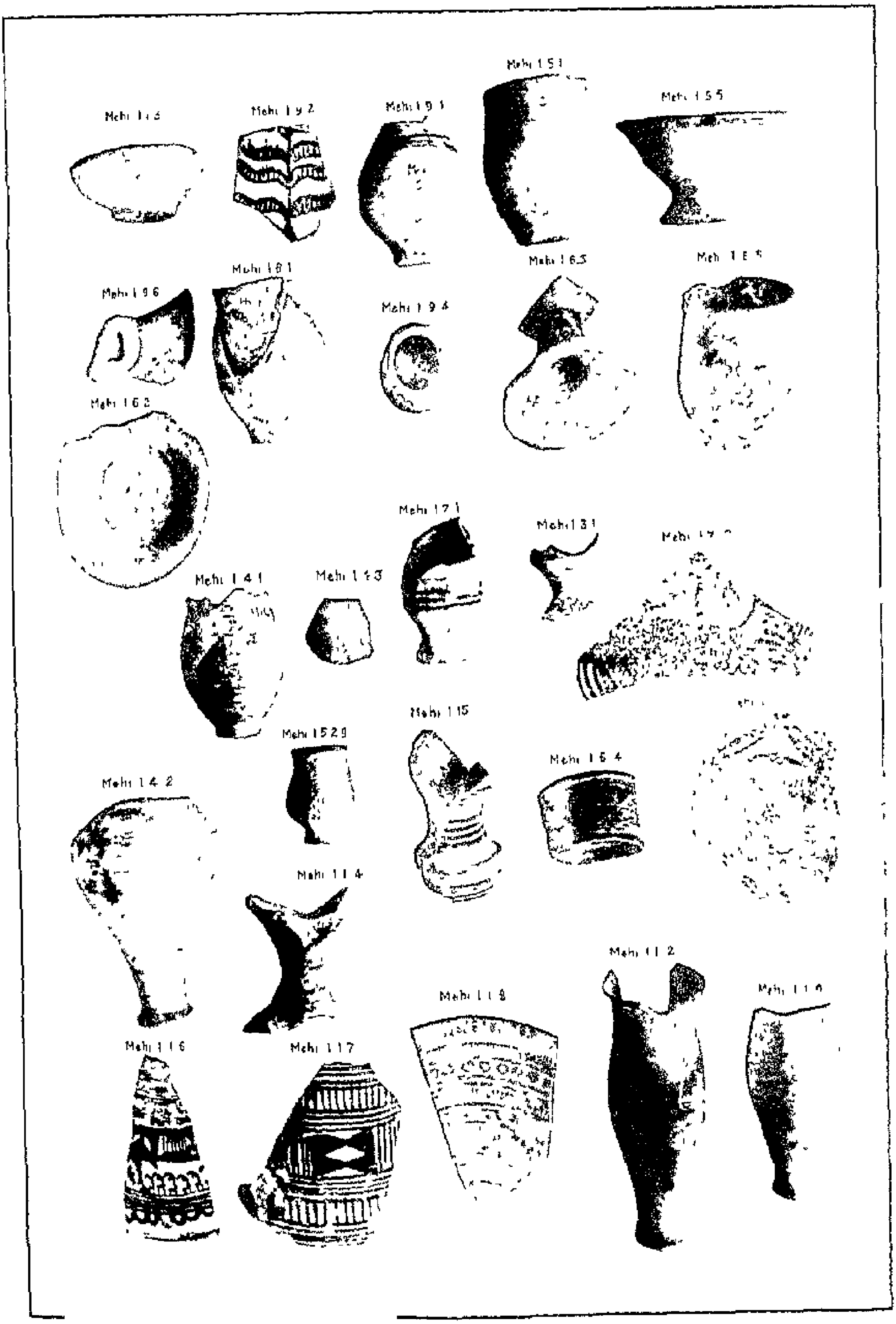
SPECIMENS OF POTTERY FROM SITES OF KOTWA HAL AND NUNDARA



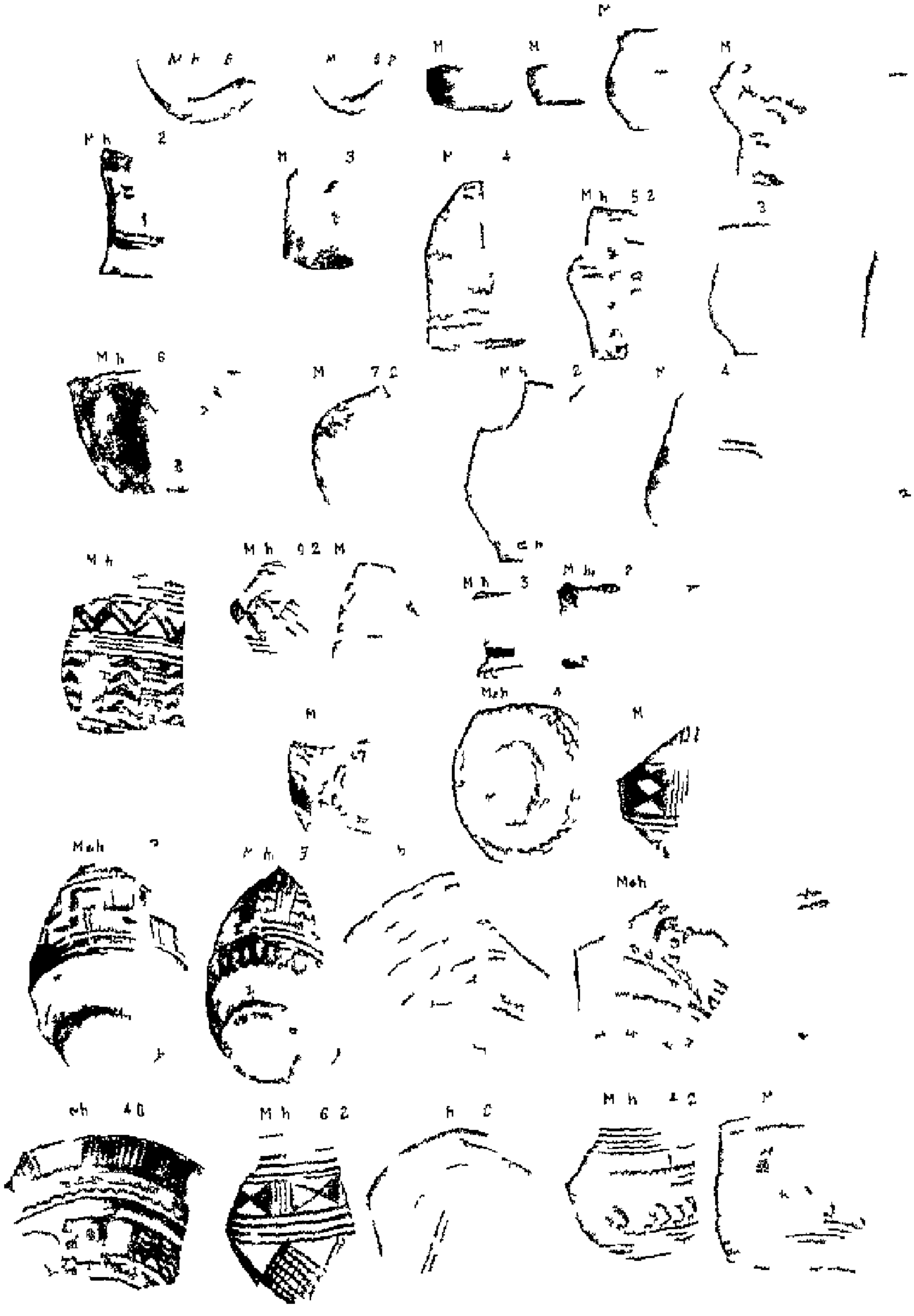
SPECIMENS OF POTTERY FROM SITES OF JHAL AND NUNDARA, JHALAWAN

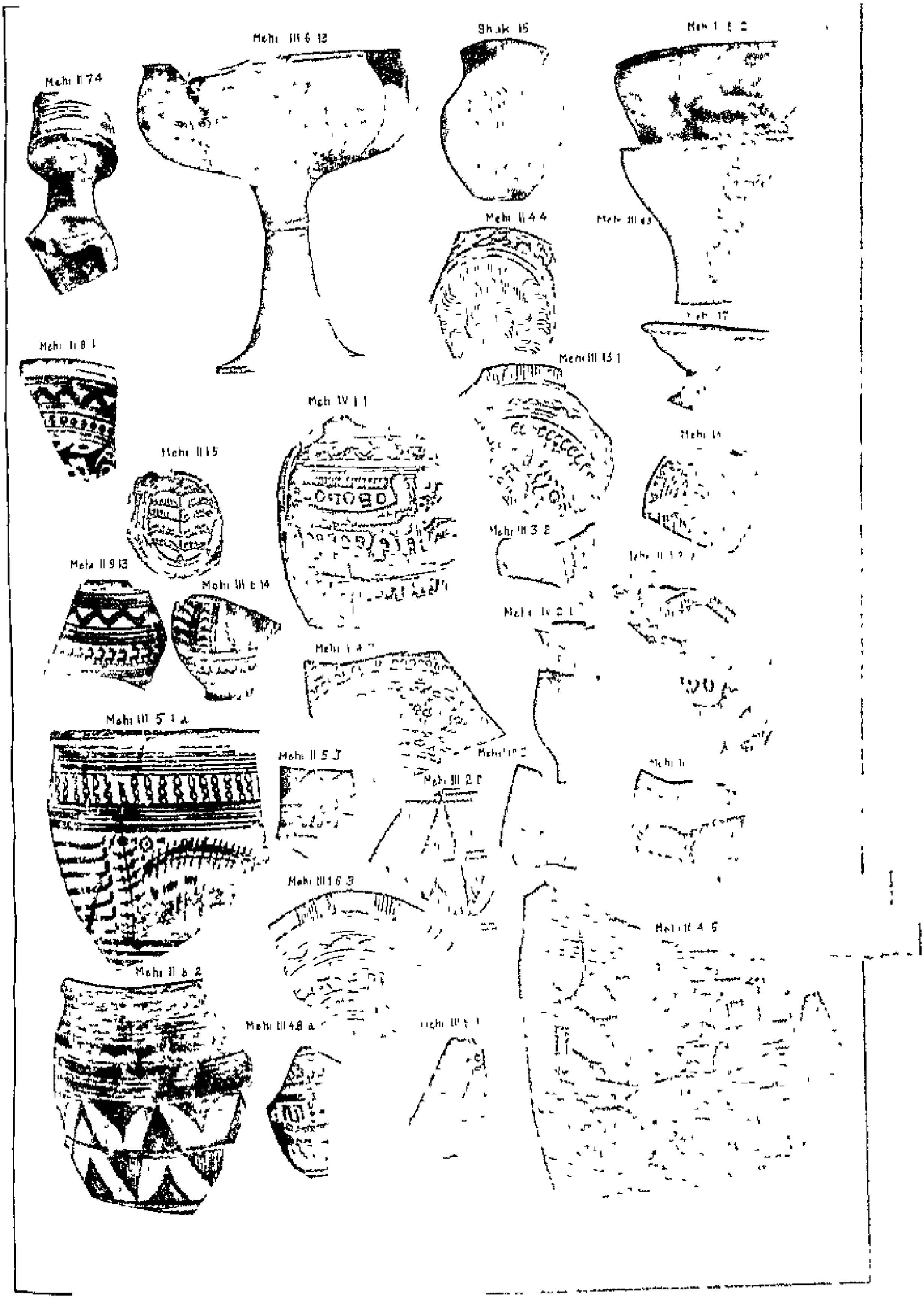


SPECIMENS OF POTTERY AND OBJECTS IN CLAY FROM SITES OF NUNDARA AND MASHKAI JHALAWAN

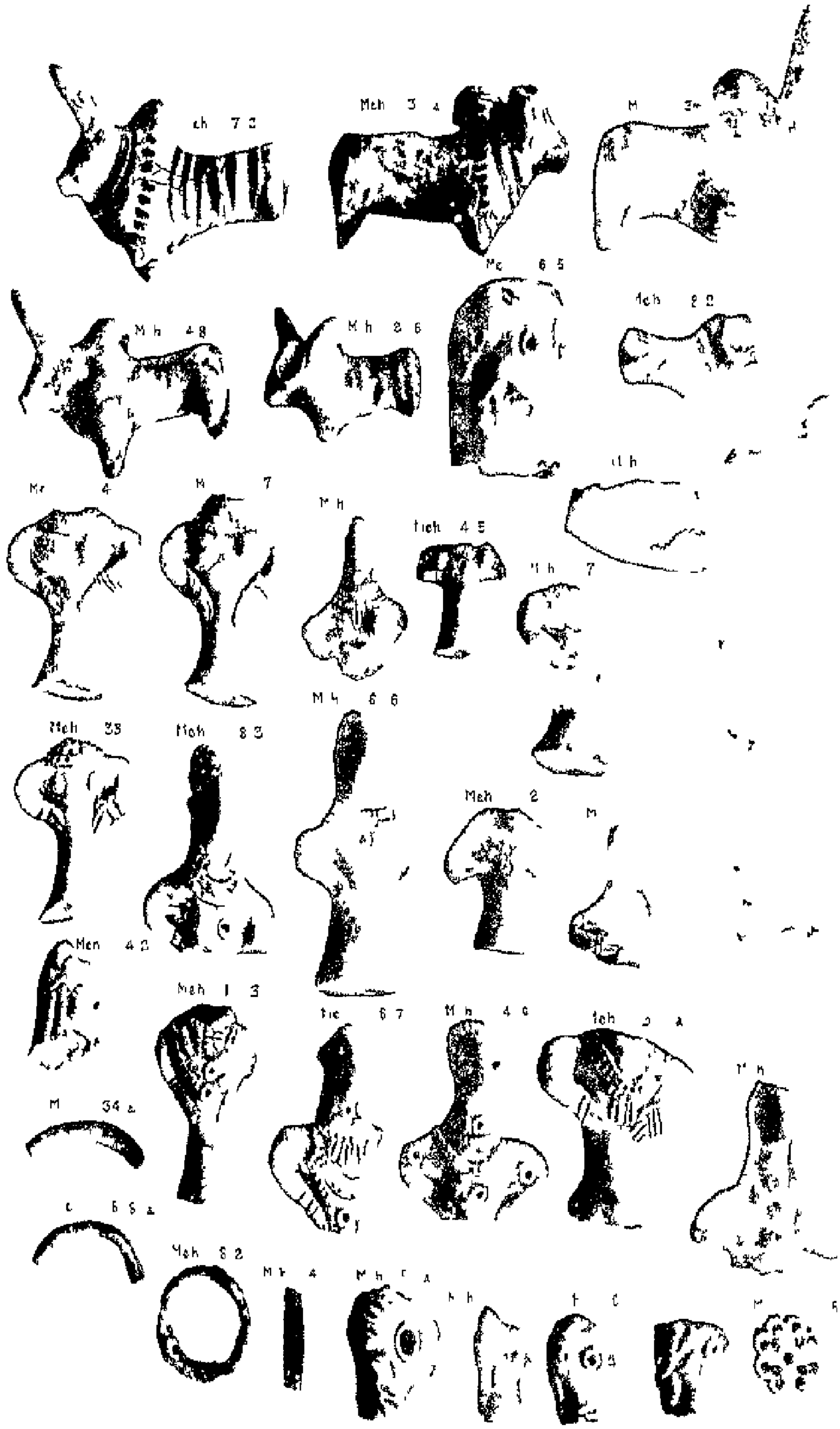


SPECIMENS OF POTTERY FROM MEHI-DAMB IN MASHKAI, JHALAWAN

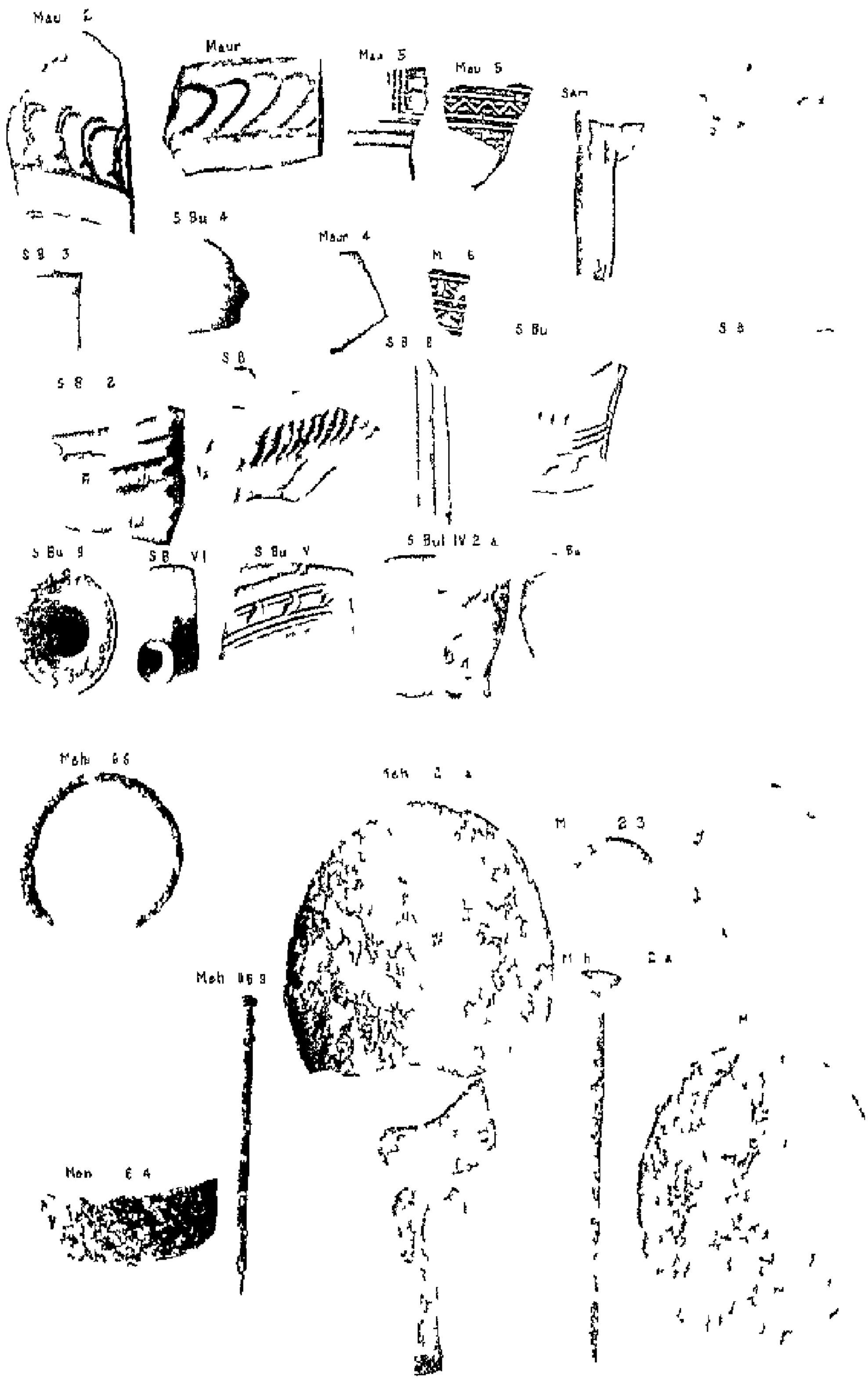




SPECIMENS OF POTTERY FROM MEHĪ DAMB, MASHKAI, JHALAWAN.



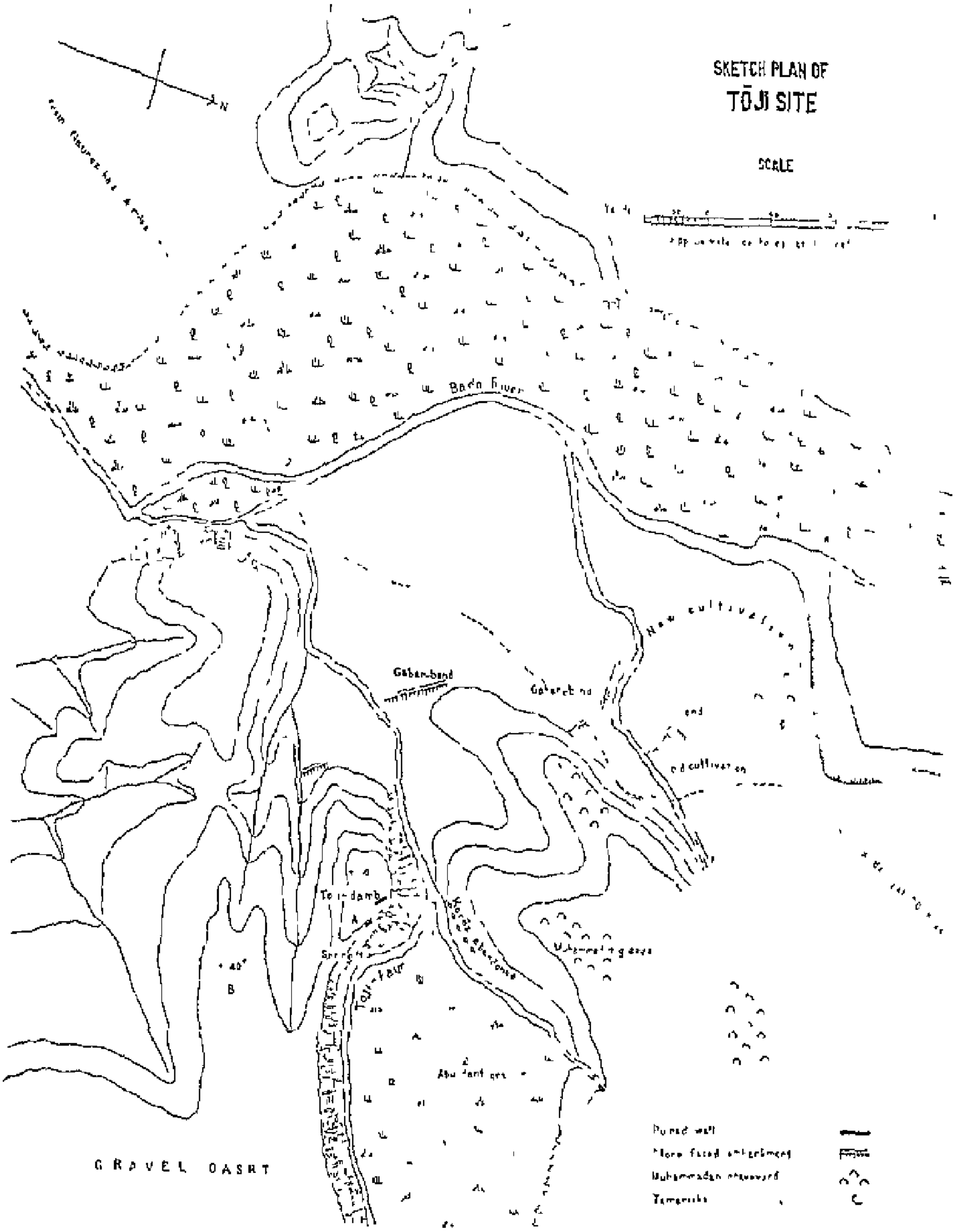
TERRACOTTA FIGURINES AND OTHER SMALL OBJECTS IN CLAY, BONE, ETC., FROM MEHI DAMB, MASHKAI, JHALAWAN

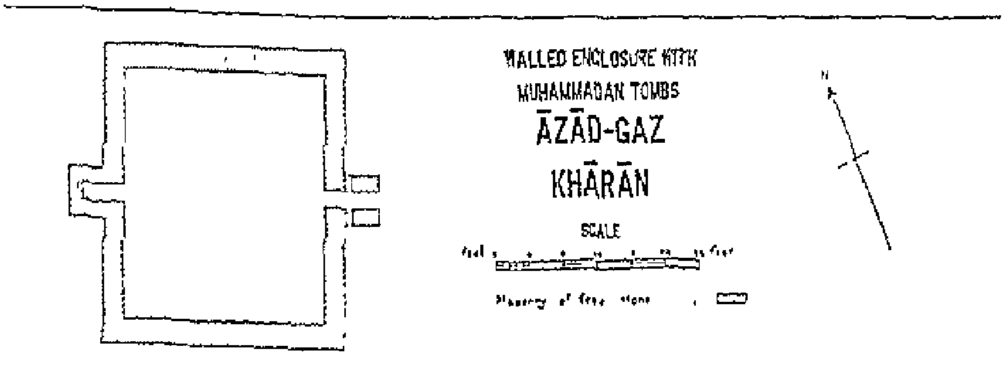


OBJECTS IN COPPER FROM MEHI DAMB, MASHKAI, AND SPECIMENS OF POTTERY FROM MASTUNG SITES, SARAWAN



SPECIM N OF POTT Y FROM N I . M . . . T O H


SKETCH PLAN OF
TŌJI SITE
SCALE
N
Bado River
Gaban-band
New cultivation
Spring
Ruined wall
Stone faced embankment
Muhammadan graveyard
Tamarisks
GRAVEL DASRT


WALLED ENCLOSURE WITH
MUHAMMADAN TOMBS
ĀZĀD-GAZ
KHĀRĀN
SCALE
N

SKETCH PLAN OF
P R SHA HASAN MOUND
KHĀRĀN

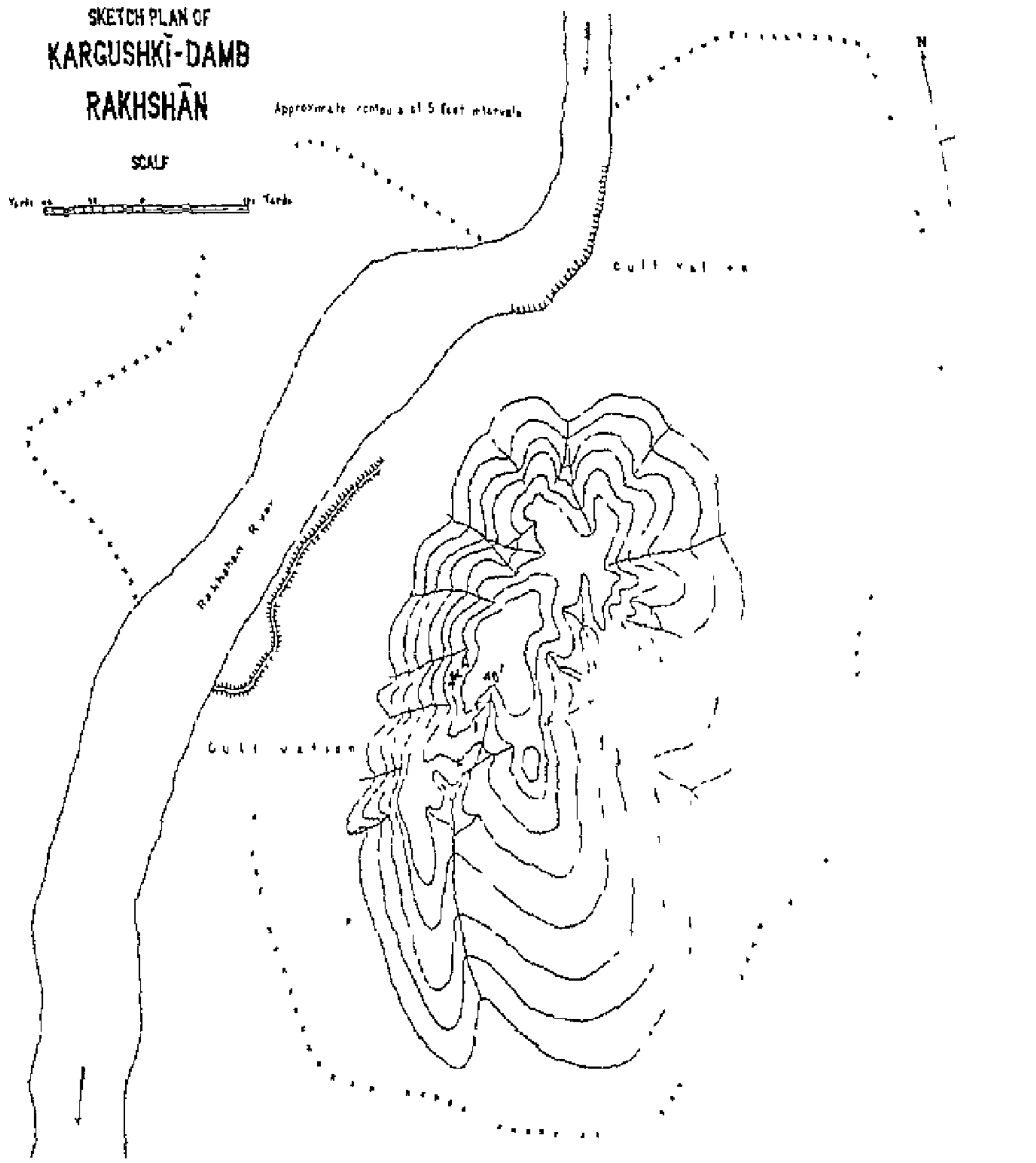
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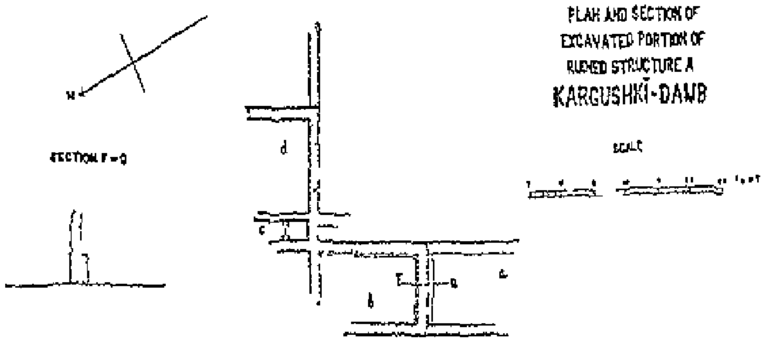


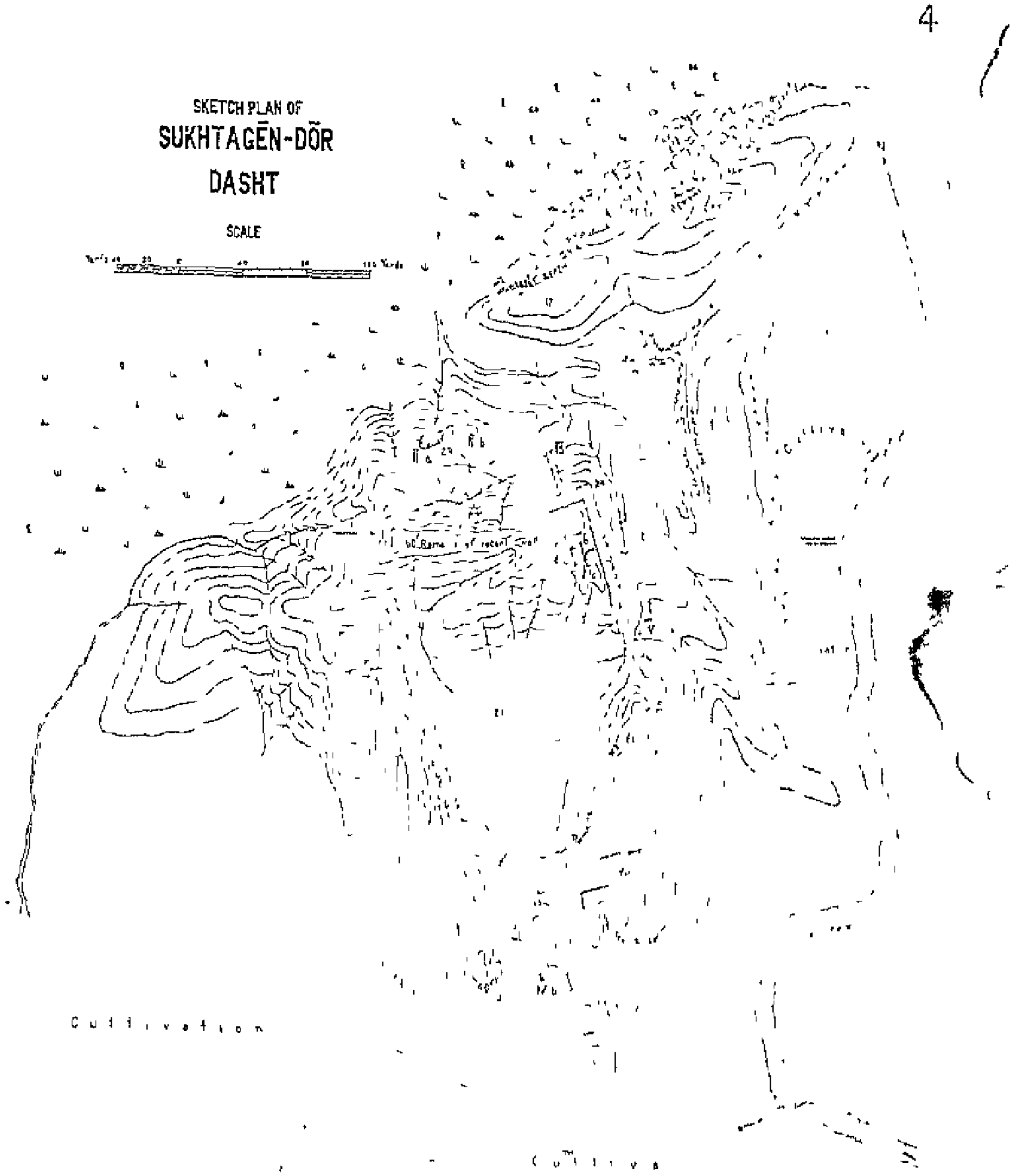
SKETCH PLAN OF SITES AT
NĀG RAKHSHĀN

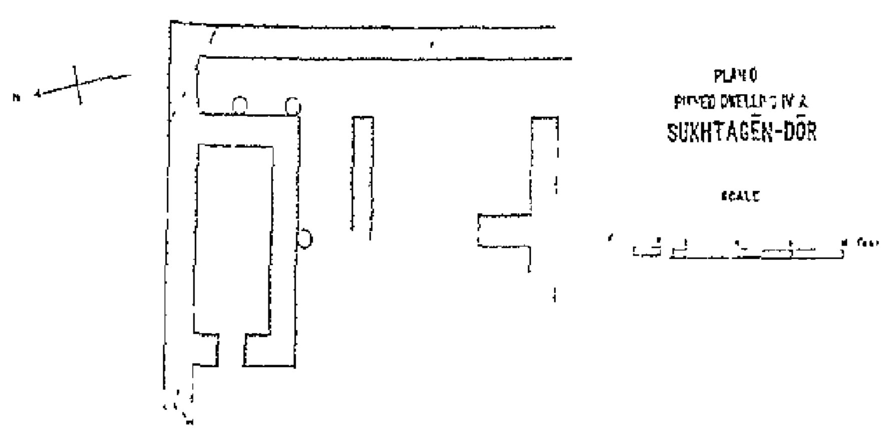
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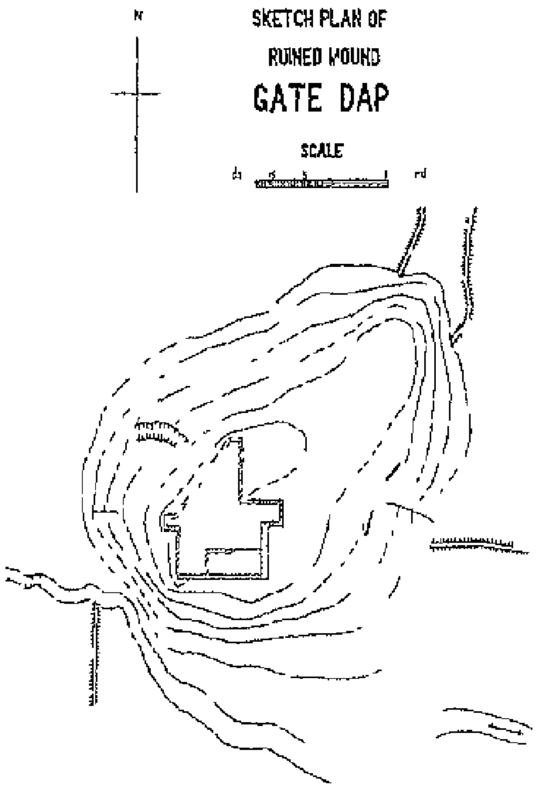


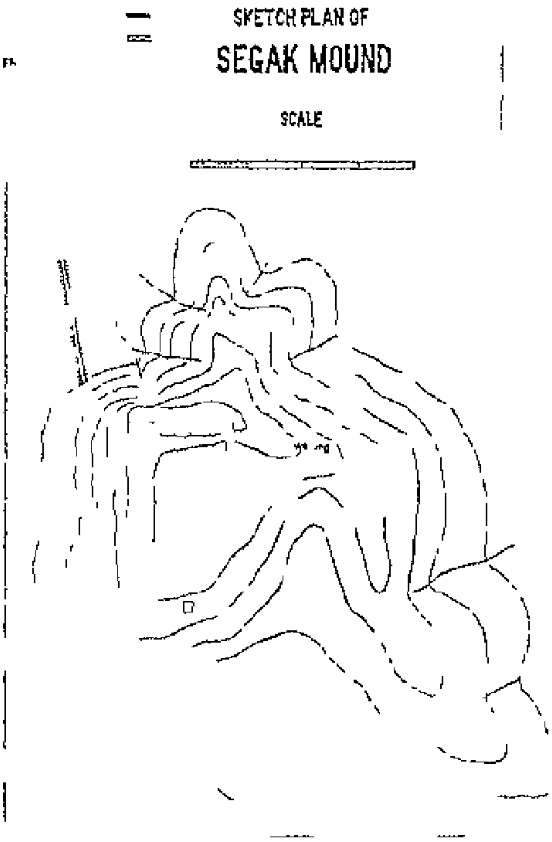

SKETCH PLAN OF
KARGUSHKĪ-DAMB
RAKHSHĀN
SCALE
N
Rakhshan River
Cultivation
Cultivation

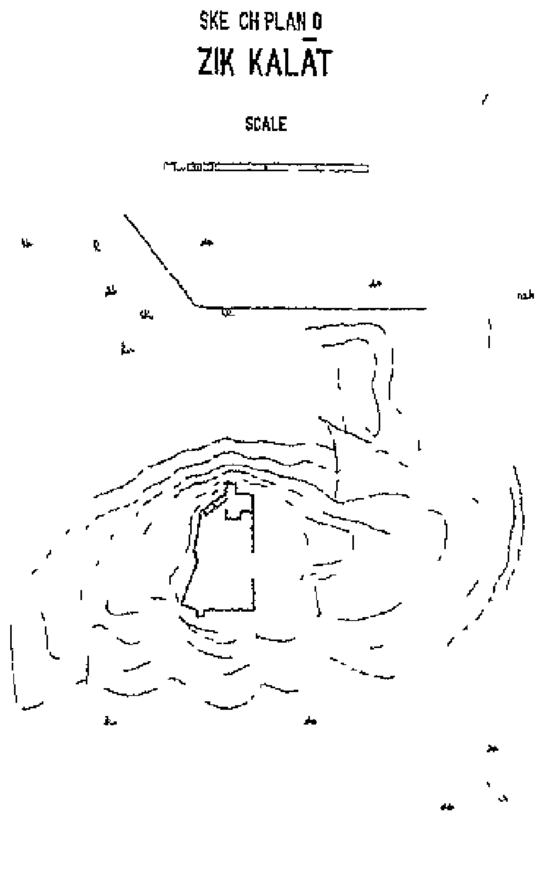

PLAN AND SECTION OF
EXCAVATED PORTION OF
RUINED STRUCTURE A
KARGUSHKĪ-DAMB
SCALE
SECTION F-G
d
c
b
a
N

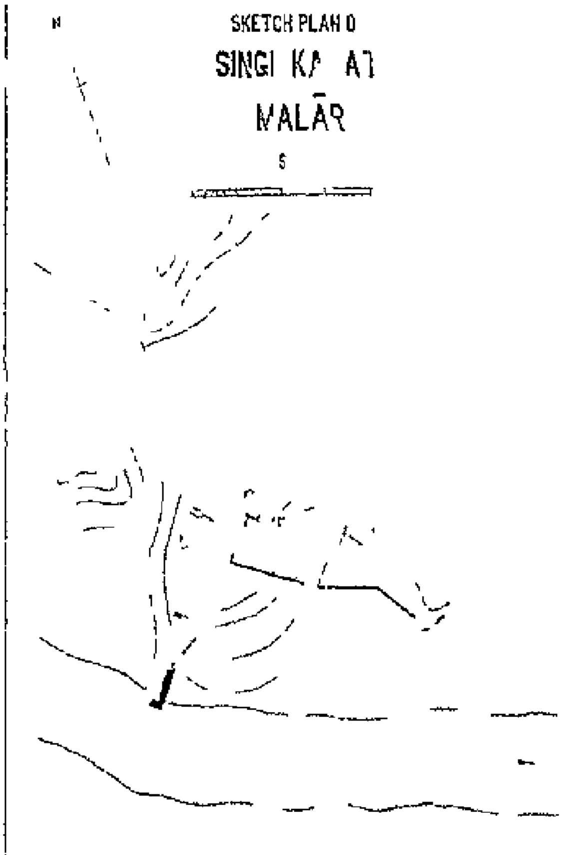

SKETCH PLAN OF
SUKHTAGĒN-DŌR
DASHT
SCALE
Cultivation

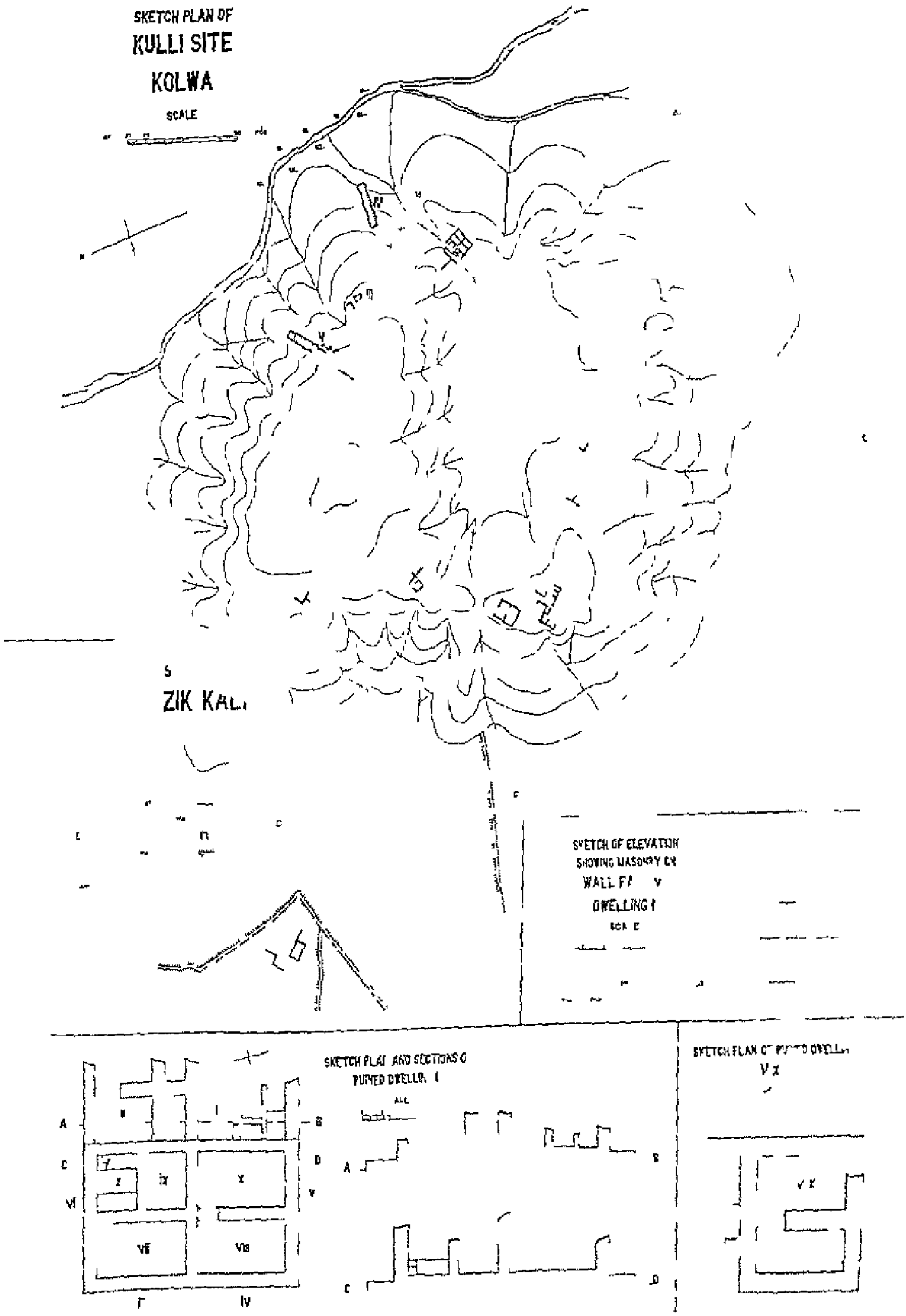

SUKHTAGĒN-DŌR
SCALE

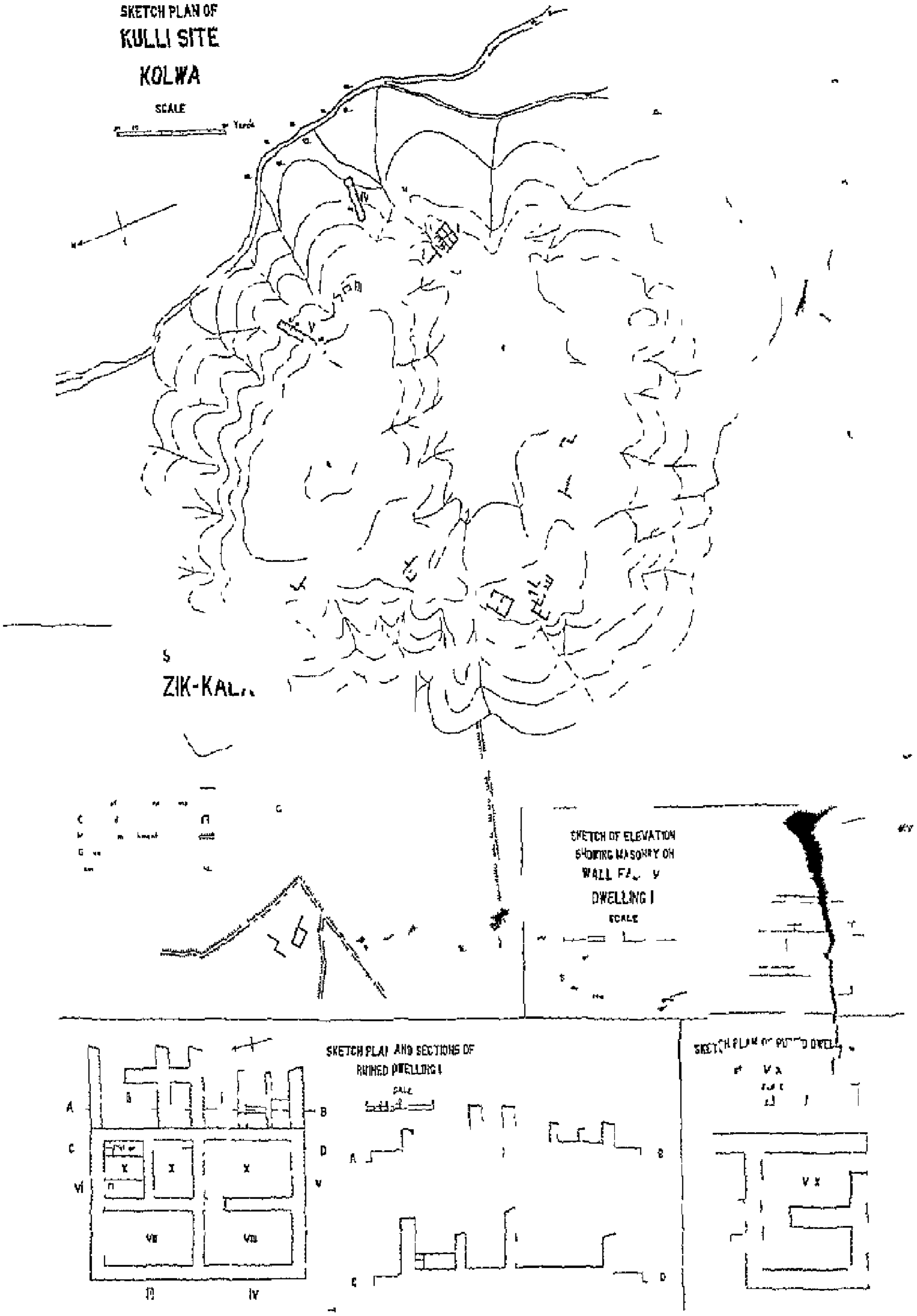

SKETCH PLAN OF
RUINED MOUND
GATE DAP
SCALE

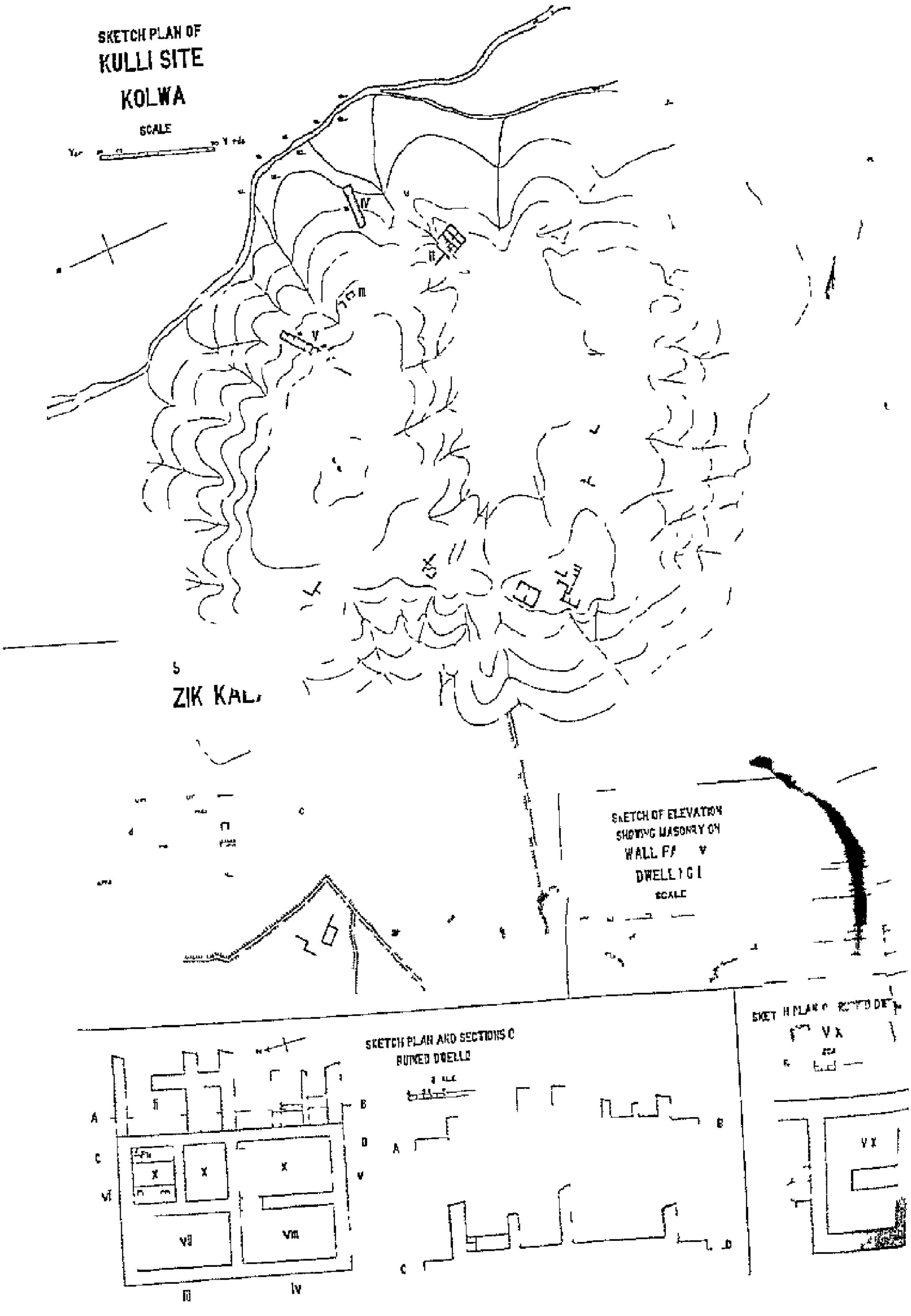

SKETCH PLAN OF
SEGAK MOUND
SCALE


SKE CH PLAN O
ZIK KALĀT
SCALE


SKETCH PLAN O
MALĀR

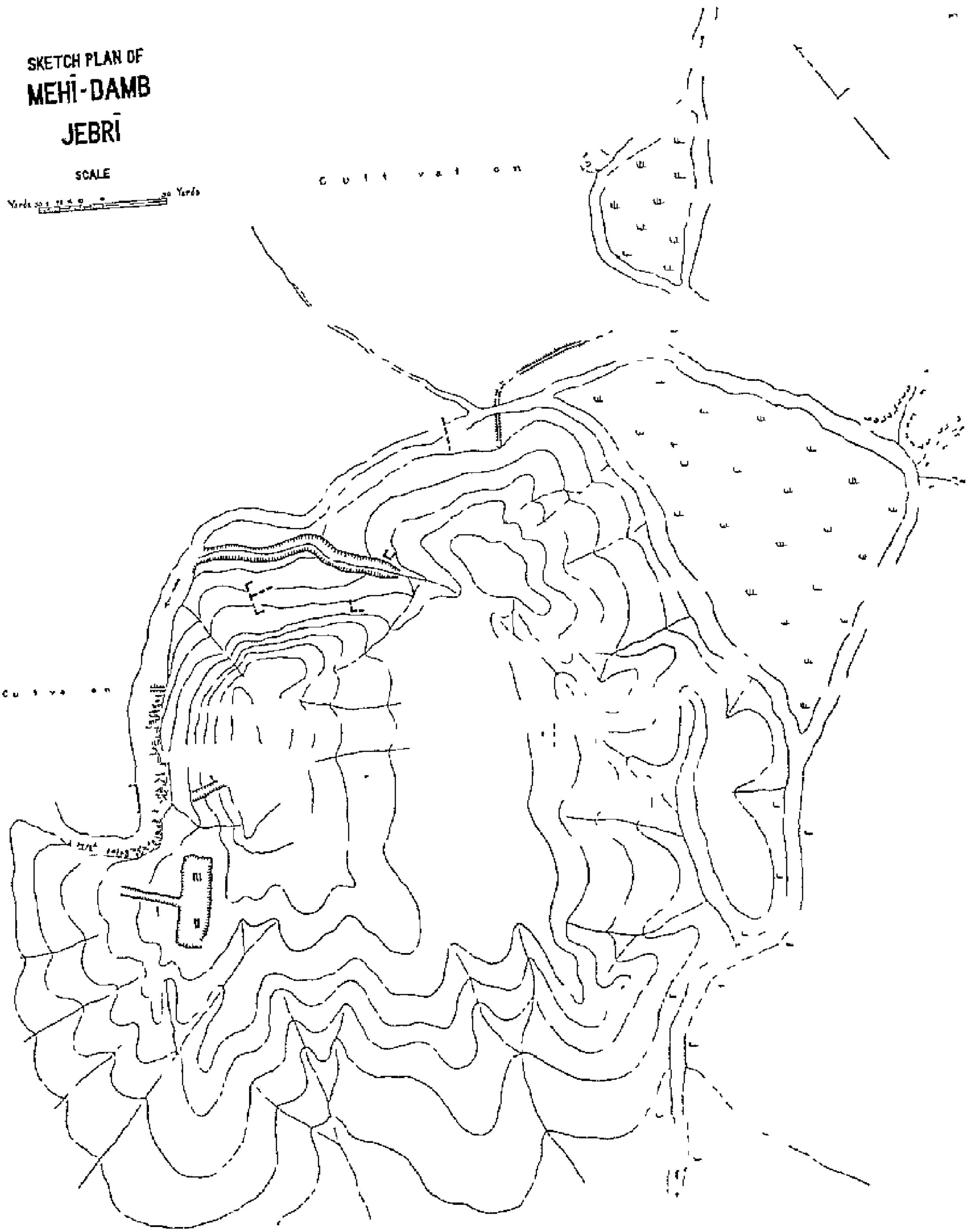

SKETCH PLAN OF
KULLI SITE
KOLWA
SCALE
ZIK KAL
SKETCH PLAN AND SECTIONS
A
B
C
D
VI
VII
VIII
IV
V X

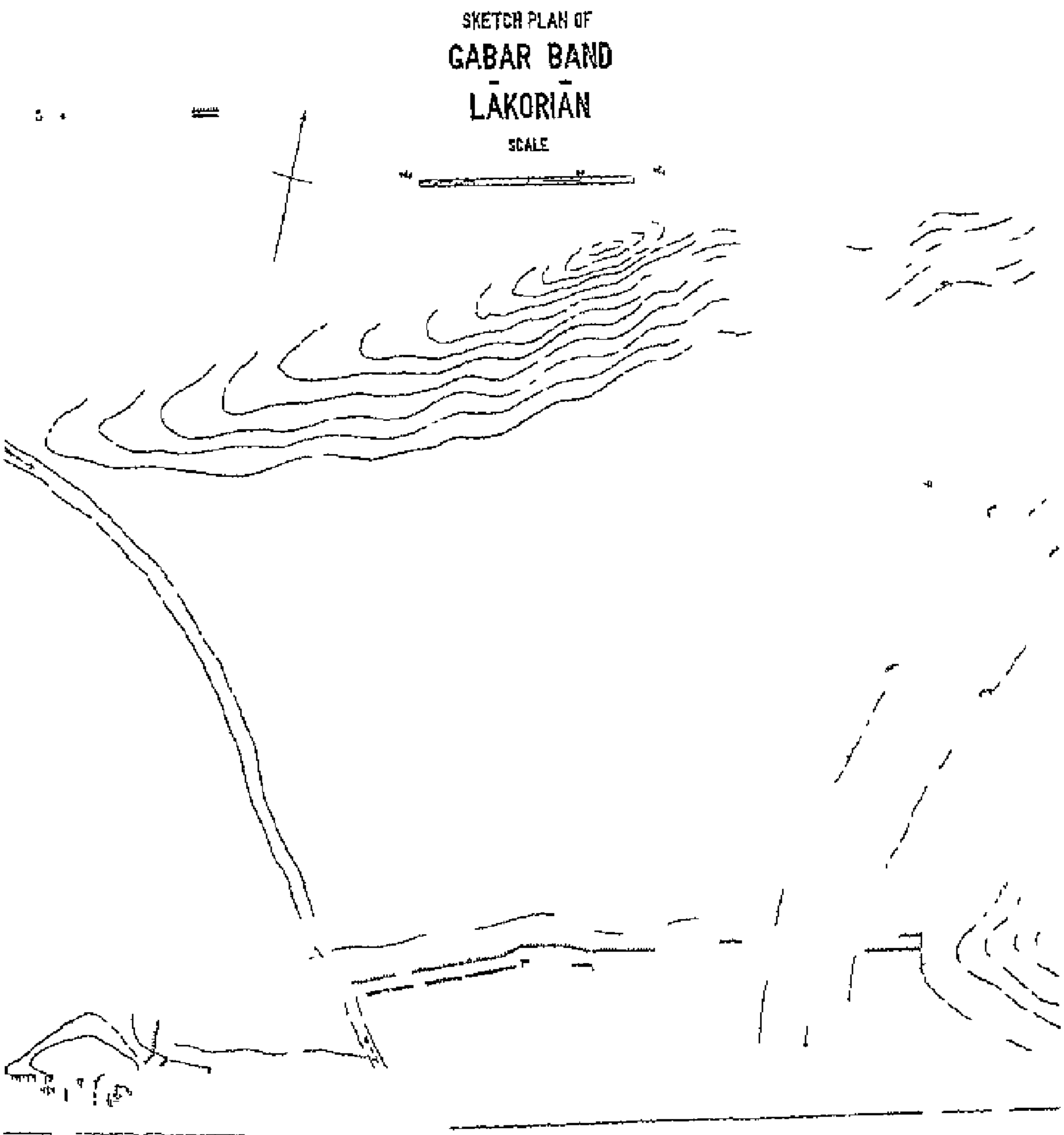

SKETCH PLAN OF
KULLI SITE
KOLWA
SCALE
SKETCH OF ELEVATION
SHOWING MASONRY ON
DWELLING I
SCALE
SKETCH PLAN AND SECTIONS OF
RUINED DWELLING I
A
B
C
D
VI
V
X
VII
VIII
III
IV

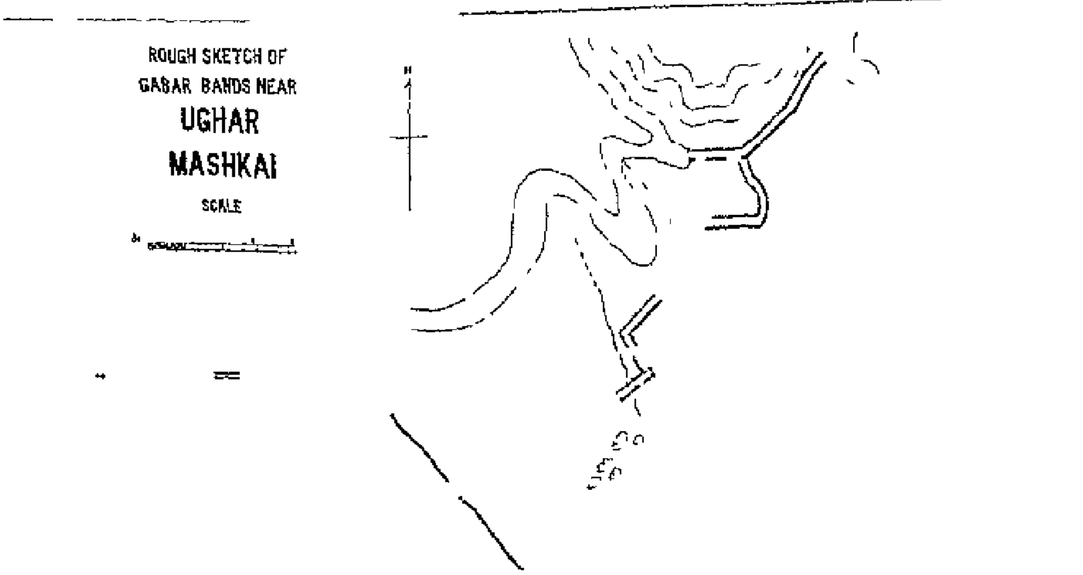

SKETCH PLAN OF
KULLI SITE
KOLWA
SCALE
SKETCH OF ELEVATION
SHOWING MASONRY ON
SCALE
A
B
C
D
X
VII
VIII

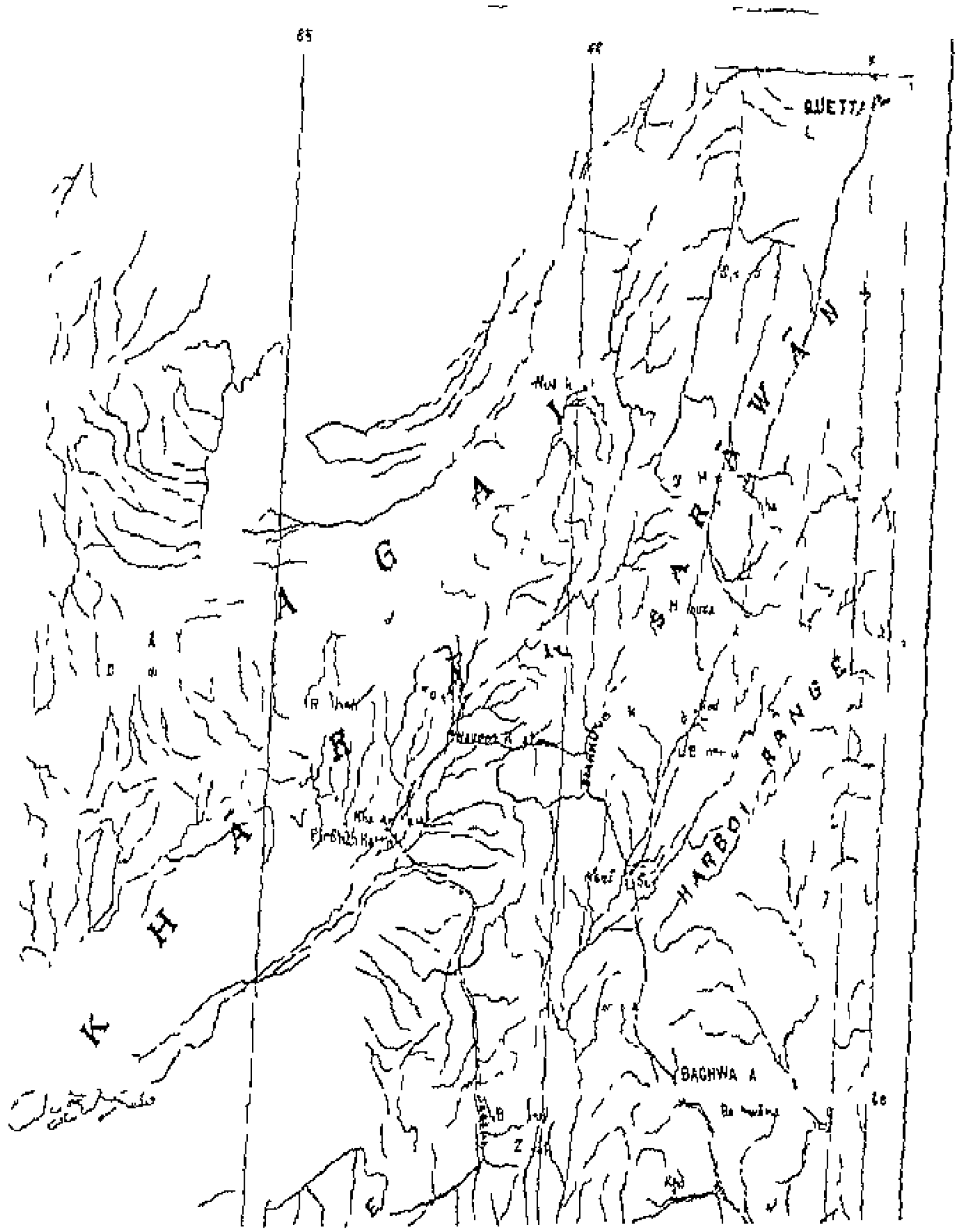
SKETCH PLAN OF
MEHĪ-DAMB
JEBRĪ

SCALE

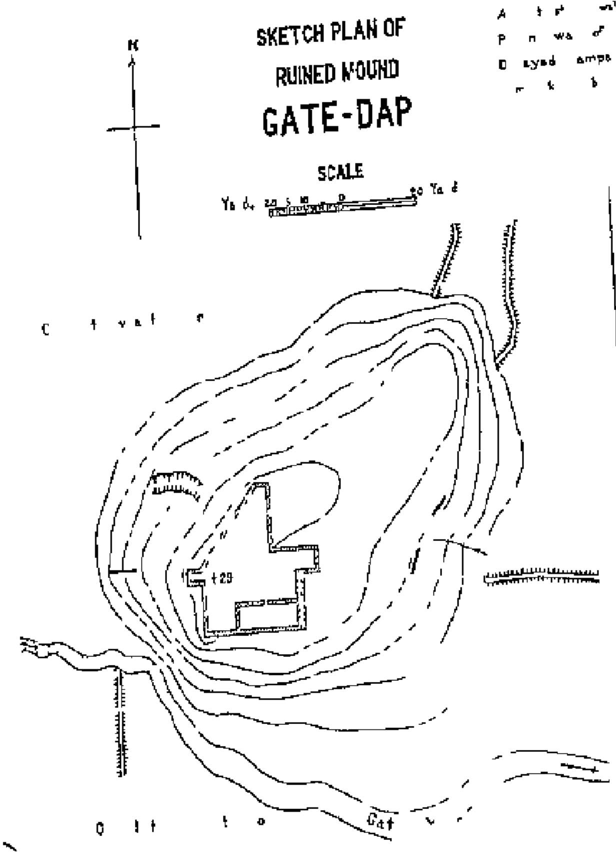


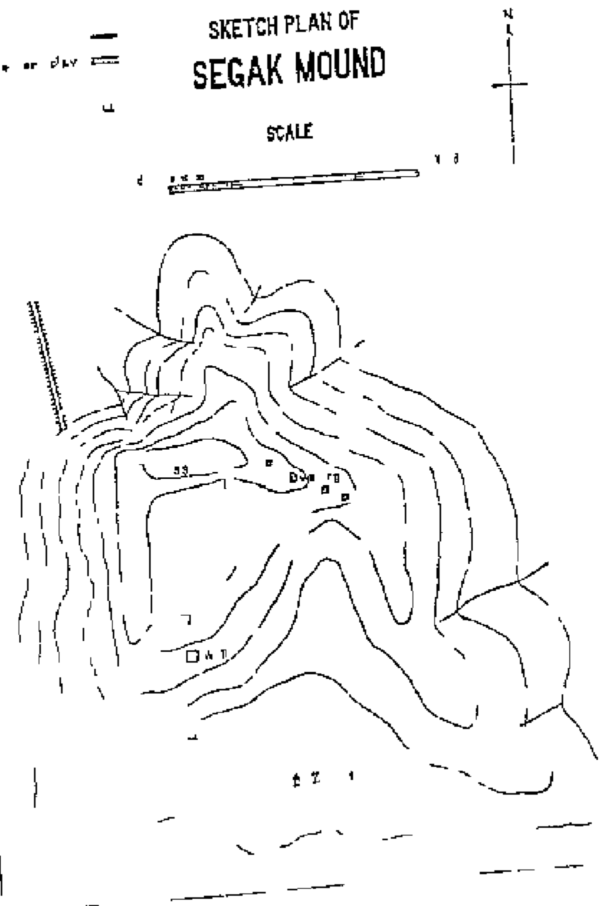

SKETCH PLAN OF
GABAR BAND
LAKORIAN
SCALE

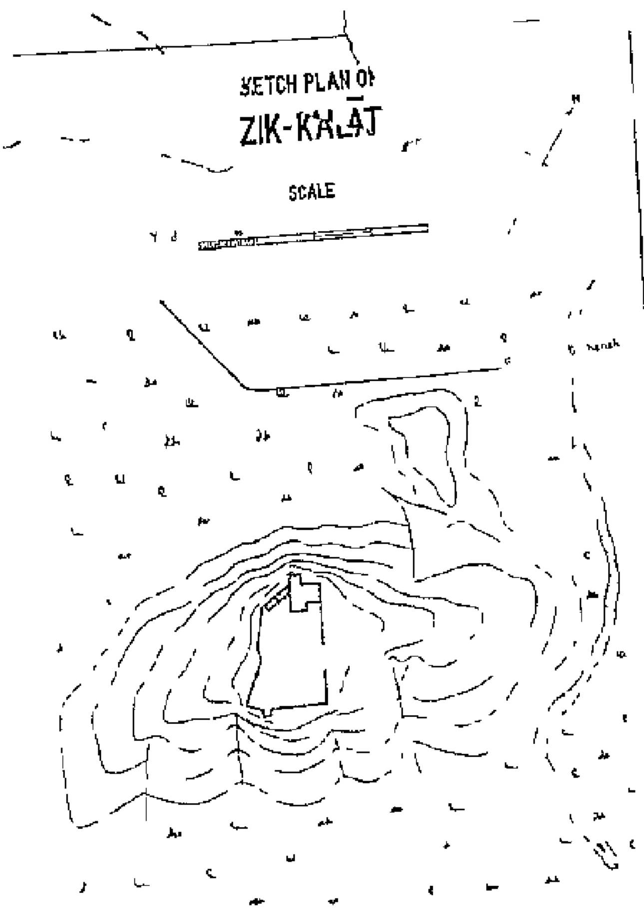

ROUGH SKETCH OF
GABAR BANDS NEAR
UGHAR
MASHKAI
SCALE

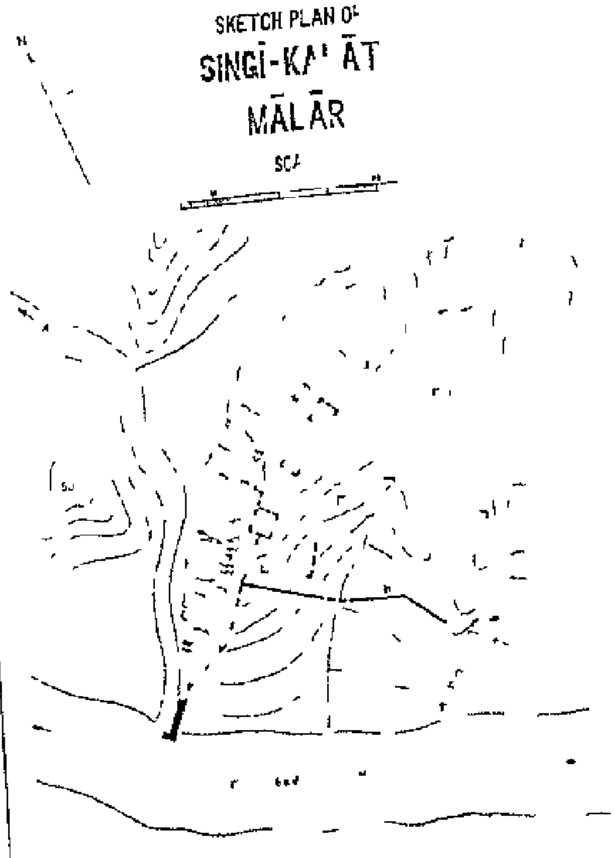


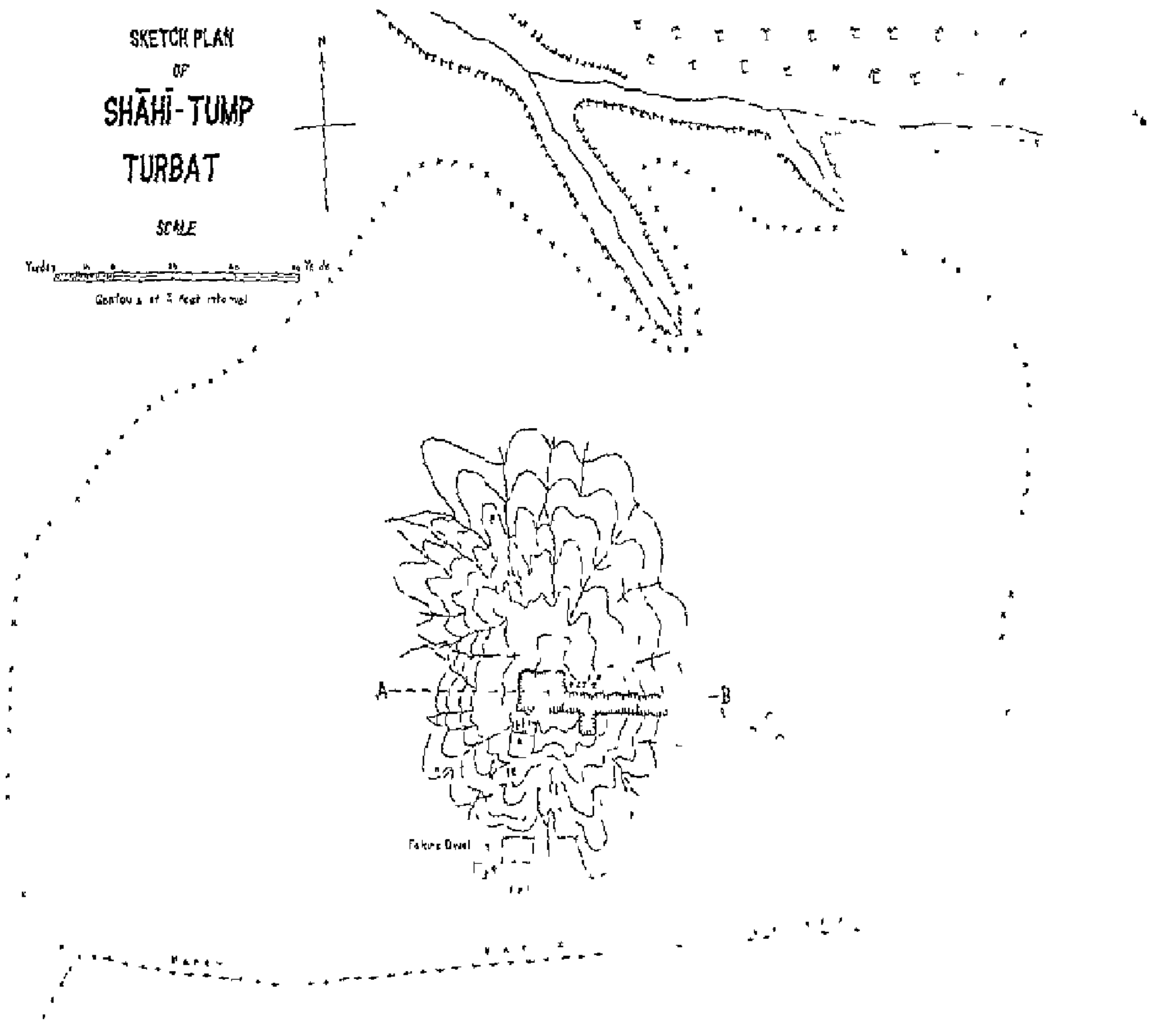
QUETTA
SARAWAN
HARBOI RANGE
BAGHWA

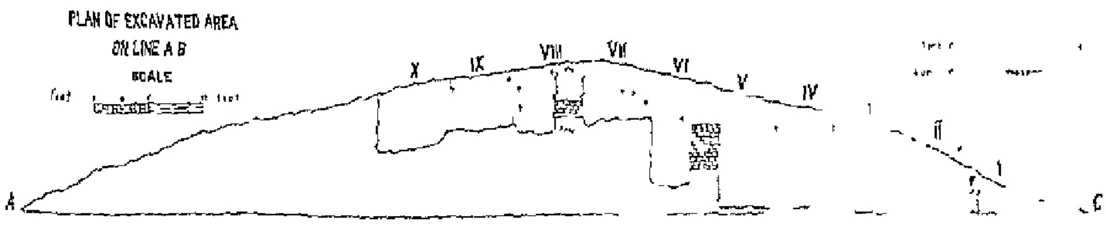

SKETCH PLAN OF
RUINED MOUND
GATE-DAP
SCALE
N

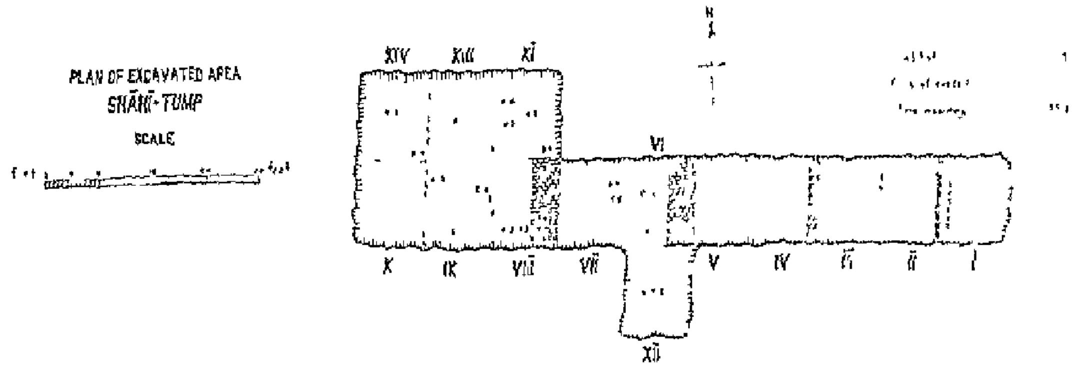

SKETCH PLAN OF
SEGAK MOUND
SCALE


SCALE


SKETCH PLAN OF
MĀLĀR


SKETCH PLAN
OF
SHĀHĪ-TUMP
TURBAT
SCALE
Contours at 5 feet interval
N
A
B

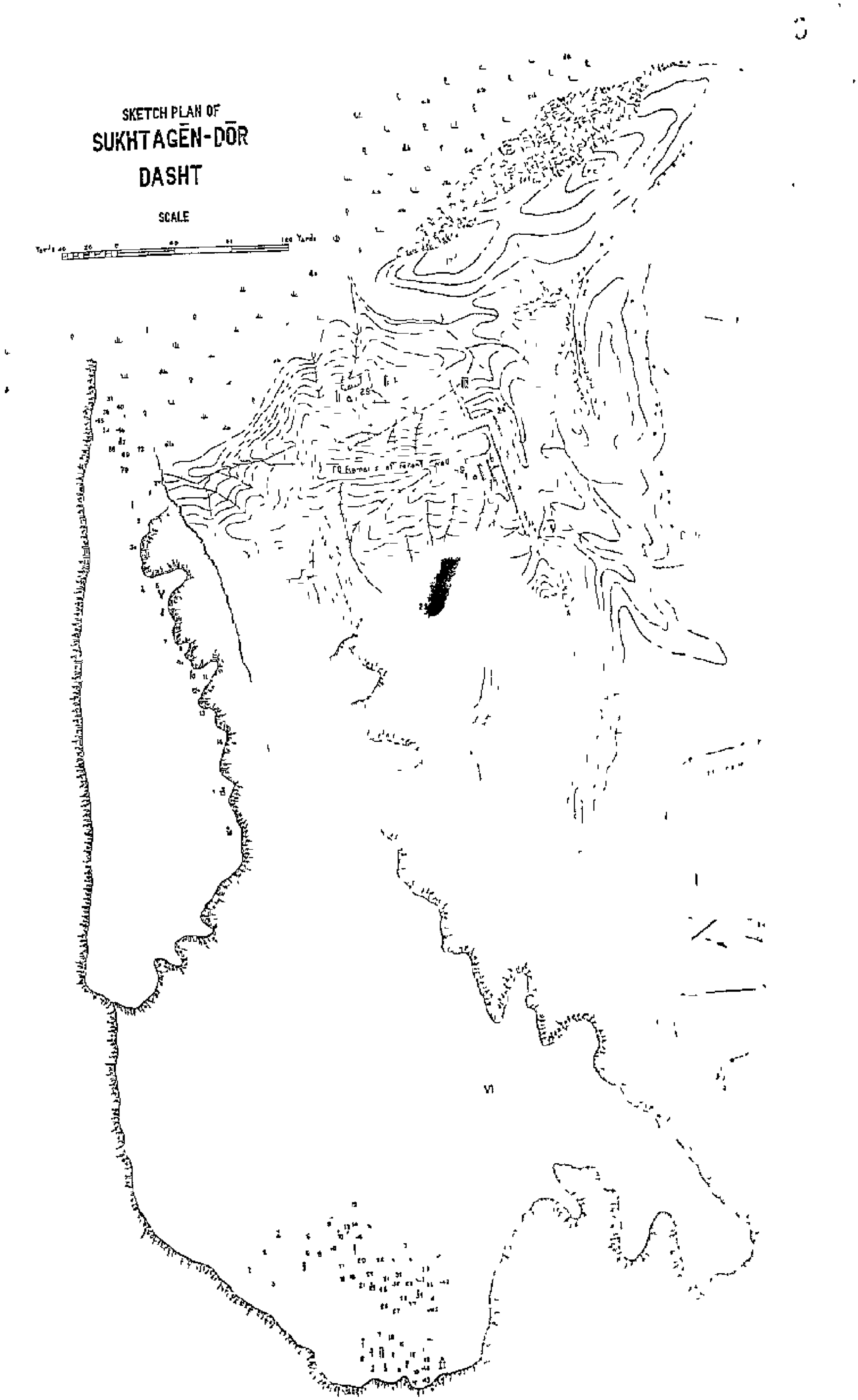

PLAN OF EXCAVATED AREA
ON LINE A B
SCALE
X
IX
VIII
VII
VI
V
IV
II
I
A
C

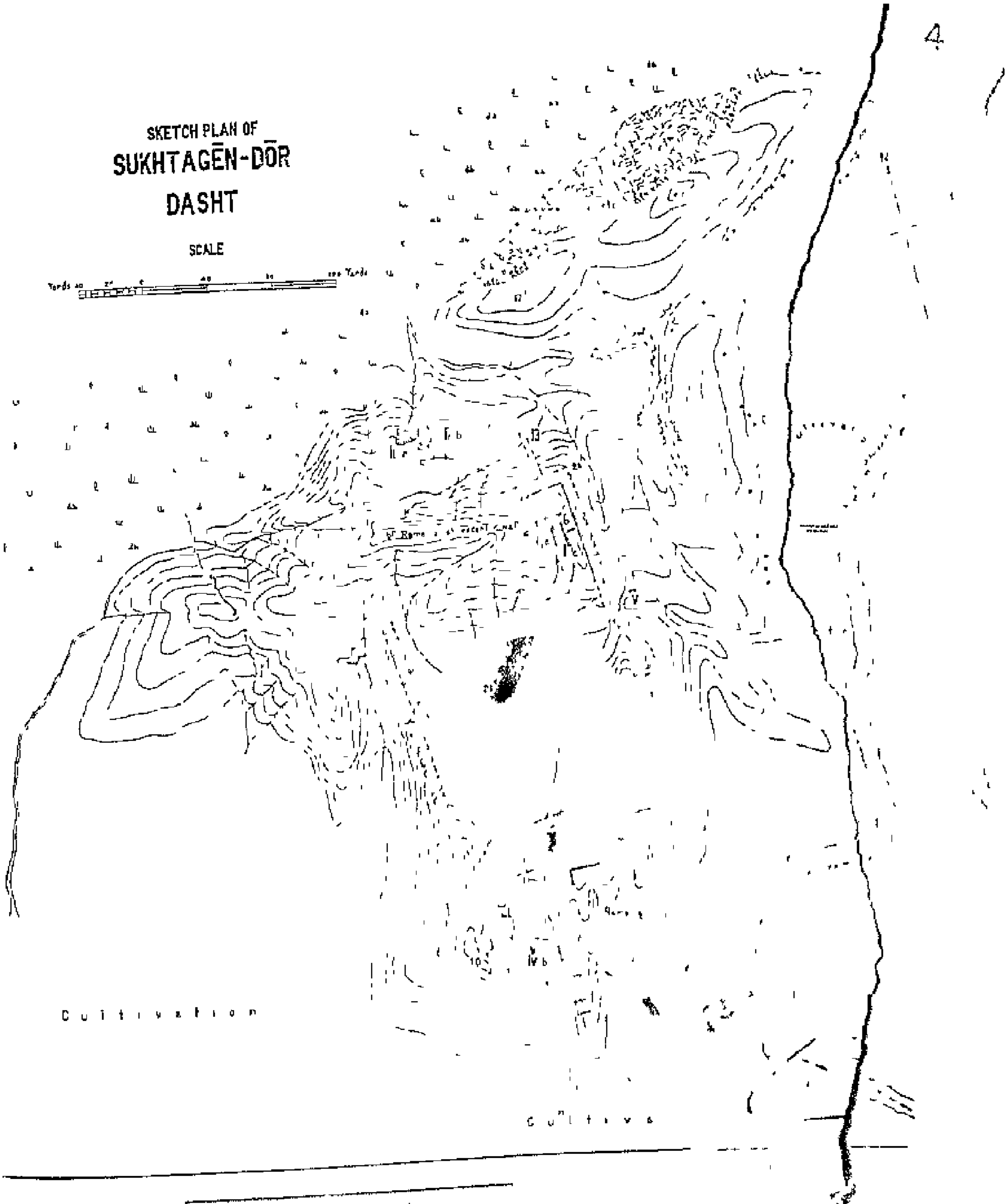

PLAN OF EXCAVATED AREA
SHĀHĪ-TUMP
SCALE
N
XIV
XIII
XI
VI
X
IX
VIII
VII
V
IV
III
II
I
XII

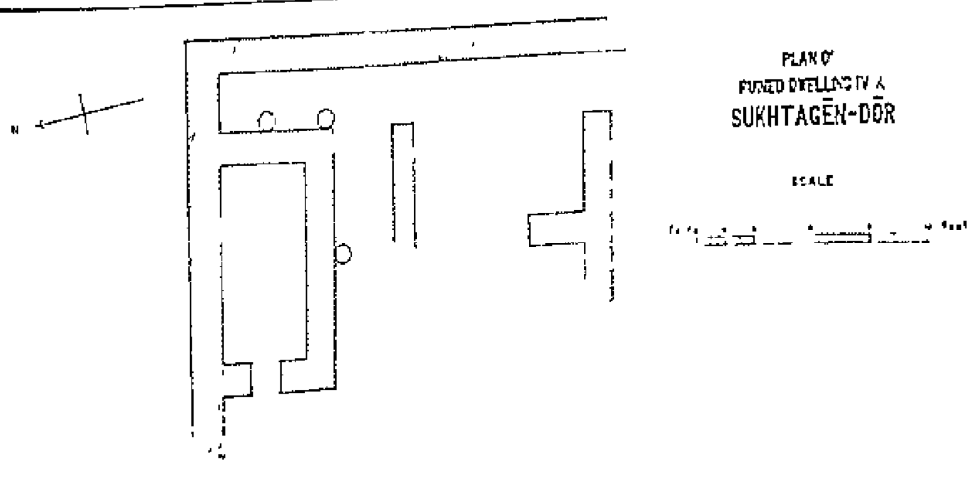
SKETCH PLAN OF
BURIAL CAIRNS AT
ZANGIĀN
TURBAT

SCALE




SKETCH PLAN OF
SUKHTAGĒN-DŌR
DASHT
SCALE
100 Yards
V
VI


SKETCH PLAN OF
SUKHTAGĒN-DŌR
DASHT
SCALE
Cultivation


PLAN OF
SUKHTAGĒN-DŌR
SCALE